# RUMEMIA8tER BOOK2 

by Tim Doty

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## Combat

When diplomacy fails, violence prevails. Combat is an integral part of most roleplaying games and Rune Master is no exception. Although detail is an important aspect of these rules, ease of use is a significant consideration. Achieving a proper balance of the two depends a lot on the details of a particular campaign so there are basic, core rules presented in the main text. These are supplemented by more advanced rules which provide greater detail.

Whether or not to use any given advanced rule is up to the referee. Some place additional restrictions on the characters while others grant additional options. As long as the advanced rules are applied consistently within a single fight, balance is maintained.

## Ordering Actions

Combat is structured on the idea of rounds, each round spanning six seconds of time. Declarations of intent are made at the beginning of each round, actions performed in strike rank order, and book keeping taken care of at the end.

The action portion of each round is comprised of twelve strike ranks numbered from eleven to zero. Strike rank eleven (SR 11) occurs before any movement is possible. Movement can only occur on strike ranks ten to one with SR 0 representing the final after movement possibility of action. So each round the strike ranks are counted down from 11 through 0 .

It is possible for a character to have an action strike rank greater than 11, particularly when using missile weapons. In such cases the round starts at their strike rank, rather than SR 11, though movement can still only occur on strike ranks ten to one.

## Declarations of Intent

At the beginning of a round each participant declares his character's intended actions for the round. Permitted actions include movement, melee engagement, spell casting, ranged attacks, and general actions in support of these efforts.


A character's action strike rank is determined by his base SR, the weapon being used and possibly other modifiers such as the character's skill with the weapon. This adjusted strike rank should be recorded on the character sheet for quick reference. The Action adjSR table lists the basic adjustments for each type of action. In the

| Adjusting Strike |  |  |
| :--- | :---: | :---: |
| Rank |  |  |
| Reach | Skill | Shift |
| Close | $3-8$ | -1 |
| Short, |  |  |
| Medium, | $9-15$ | 0 |
| Long |  |  |
| Pole | $16-23$ | +1 |
| Extreme | $24-30$ | +2 |
|  | ea. +15 | $(+1)$ |


| Action adjSR |  |
| :--- | :---: |
| Action | Shift |
| Generic action | +3 |
| Melee attack | by weapon |
| Ranged attack | +10 |
| Spell casting | +2 | case of melee attacks the Adjusting Strike Rank table should be consulted to determine the effect of the weapon's reach the character's skill on the melee weapon's SR. Note: only melee weapon skills influence SR, not ranged weapon or spell casting skills.

## Non-Tactical Movement

A character can declare he is going to make nontactical movement. In such a case he is able to move up to Mv feet in each movement strike rank. However, he will be unable to make or defend himself against any attack, melee or missile, that is made against him. Further, any spell that requires targeting-whether against a creature, object or area-cannot be cast.

## Tactical Movement

A character can declare he is going to make tactical movement. In such a case he is able to move up to $1 / 2 \mathrm{Mv}$ feet in each movement strike rank and defend

## Strike Rank Shift

A character 's action strike rank may be optionally adjusted by the roll of $1 d 10$ and consulting the following table. When a strike rank shift is used it is rolled for after all intents have been declared and before any actions are performed.

| Roll | 1 | 2,3 | $4-7$ | 8,9 | 10 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Shift | -2 | -1 | 0 | +1 | +2 |

against attacks using half his chosen defense score. Although he cannot move while doing so, the character can make ranged attacks and cast spells.

A ranged attack prohibits movement from when aim starts through when the attack is made. A spell casting prohibits movement while it is being cast and a melee attack cannot be made while the character is moving.

## Combat Step

A character taking a combat step is only allowed to either move one hex with a single hex-facing change, or to remain in a hex and turn to any hexfacing. Such restricted movement permits making any attack or defense at normal skill scores. The combat step may not be taken during an attack or spell casting, the durations of which are as noted under Tactical Movement. A normal melee attack is considered to last from the beginning of the round through the strike rank in which the character amkes the attack.

## Ranged Attack

A character may only make a ranged attack if he is using tactical movement or combat step. A ranged

## Calling Ranged Shots

A character can optionally declare the general location to be struck by a ranged attack, but if choosing a location other than the torso (chest or abdomen in the case of humanoid targets) the attack is at a penalty of 6. The penalty is increased to 10 in the event that minor limbs, such as the legs of a scorpionman, are targeted.

If a shot has been called there is a four in six chance that a successful attack will strike the designated location, otherwise it will strike the adjacent torso location instead.

A character can reduce the penalty for making a called shot by six by spending a full round aiming at the target in addition to making a long aim. The extra round of aim can be either before or after the long aim. For example, if the character designates the target in SR 10 he can complete a long aim in that round. He would then spend the rest of that round and the entire next round aiming. The attack would occur in $S R 0$ of the round following the one in which aiming started.

## Tactical Awareness

As an added complication a character may be required to declare who he is tactically aware of. A character can only track a number of opponents equal to his Tactics skill level, plus his Scan skill level if not engaged in melee.

If the character is not tactically aware of the source of an attack but is moving more than a combat step he can declare a Dodge defense getting half of his Dodge skill score.

If the character is tactically aware of the source of an attack then he can declare any defense and gets his normal skill score.

Attacks can only be made against targets the character is tactically aware of. Further, as the character is only acutely aware of the status of allies whom he is tracking he will be unaware of those needing assistance whom he is not tracking.
attack can only be made with a ready weapon; bows must have an arrow drawn an nocked, crossbows must be cocked and a bolt nocked, throwing axes must be held in the throwing arm, and so on.

The target of a ranged attack can be declared at the moment of attack, but doing so makes it a snap shot which gives a penalty of 6 to the action. A short aim of a single action eliminates this penalty, but the target must be declared when the aim begins. A short aim can be extended to a long aim by using a second action. In such a case the attack has a bonus of 6 to hit.

Ranged attacks can only be made against opponents in the character's front facing and within the weapon's range.

## Melee Attack

A character may only make a melee attack if he is only taking a combat step. A melee attack can only be made with a weapon that was ready at the beginning of the round. It takes one action to ready most weapons that must be drawn. For example, to draw a knife or sword.

The target of the melee attack must be declared as part of the intent and the character must be able to engage his opponent. Only opponents in the character's front facing and within reach at the beginning of the round can be engaged.

## Combat

## Spell Casting

There are three cases for spell casting: castings that take one or more rounds, castings that take a single action and castings that can be made reflexively. Spells that take one or more rounds to cast are resolved in SR 0 of the final round. The character is considered to be actively casting the spell for every strike rank of every round of spell casting and has his movement restricted accordingly. A spell that takes a single action takes from the beginning of the round through the character's action strike rank to cast with his movement restricted accordingly.

Spells that can be cast reflexively do not restrict movement and can be cast on SR 11 or later. If they are cast in direct response to an action they can be cast on that action's SR, even if it is greater than SR 11. For example, a defensive spell that can be cast reflexively can be used to defend against an attack made against the spell caster in SR 14.

## Other Actions

Most other actions take four strike ranks to complete, though some "actions" take multiple parts. For example, to draw an arrow and nock it are usually two separate actions. Cocking a crossbow with a cranequin takes multiple rounds. In general no movement is allowed while performing an action.

A crossbow being cocked by hand takes a single
skill roll. Other actions, such as movement, simply occur.

To help track position and orientation, movement is usually tracked on a hex grid. Each hex is five feet across and represents the smallest movement that can occur. Orientation is determined by the hex side being faced.

## Facing and Engagement

A character's front hexes are the three in front with the side hexes being those adjacent and the back hex directly behind the character. Normally a character can only attack or defend against attacks made through the front hexes.

More generally, this is known as the character's front facing, an arc of $120^{\circ}$ centered on the character's hex. Anything in the front $180^{\circ}$ arc is conaction to do so. Other crossbows require a tool be engaged which takes one action, a number of consecutive actions are then required to cock it, and finally the tool must be disengaged. A cranequine equipped crossbow can take up to 3 rounds to cock.

## Performing Actions

Actions are attempted in strike rank order from the highest SR to the lowest and resolved on the final strike rank of the action. For skilled actions, such as ranged attacks, melee attacks and spell castings, the attempt is resolved by making a

sidered visible unless otherwise obstructed or concealed. The $60^{\circ}$ arc centered on the character's rear facing is not visible to the character and the $60^{\circ}$ arcs on either side of it are only peripherally visible. In general a character is not aware of anything in or occuring in the periphereal hexes.

In the Melee Engagement figure Brand is using a long sword and has medium reach. This allows him to attack into his front hexes which are shaded for clarity. Although Günnar is in his front facing he is unable to attack with his sword due to limitations of reach. Günnar, on the other hand, is using a pole ax with pole reach and is able to reach the two hexes to engage Brand. Günnar's front hexes are shaded in the right illustration of the figure.

Brand cannot attack Günnar and thus cannot engage him, but if he takes only a combat step then he can defend himself against Günnar's attack. To be able to attack in return he will need to advance on Günnar, such as with the combat step movement action, so as to start the next round with Günnar in reach.

## Movement

When a character moves one hex his available movement points are reduced by five for the five feet that were moved. When a character has completed his movement for the strike rank any remaining movement points (up to four) are carried over to the next strike rank.

For example, a character with Mv 3 would be unable to move a hex, but would-if movement was a declared action-be able to carry over three movement points to the next strike rank, giving him a total of six movement points. If he moved one hex then he would have one movement point to carry over to the next strike rank and if he did not move

| Mobility for AGI |  |  |  |
| :--- | :---: | :---: | :---: |
| Mobility | Quadruped | Aquatic | Flier |
| Extremely High | $16+$ | $13+$ | $19+$ |
| Very High | $13-15$ | $9-12$ | $16-18$ |
| High | $9-12$ | $6-8$ | $13-15$ |
| Medium | $6-8$ | 4,5 | $9-12$ |
| Low | 4,5 | 3 | $6-8$ |
| Very Low | 2,3 | 2 | 4,5 |
| Extremely Low | 1 | 1 | $1-3$ |

at all then he would have four movement points to carry over.

Under no circumstances can a character carry over more than four movement points between strike ranks and movement points are never carried over between rounds.

## Changing Facing

In general a character can change hex facing once each new hex that is moved into. If he is moving slowly (no more than $1 / 2 \mathrm{Mv}$ ) then he can change two hex facings and moving with Mv 1 allows three hex facing changes upon moving into each new hex.

If the character is sprinting at up to $11 / 2 \mathrm{Mv}$ then he can only change a hex facing after moving two hexes in the same direction. If the character is moving faster than $11 / 2 \mathrm{Mv}$ he must move three hexes in the same direction before each change.

This represents a mobility of "medium" which is typical of bipeds. For other forms of locomotion consult the Mobility for AGI table. For example, a flier that has AGI 14 will have "high" mobility. The Turn Rate table is then consulted to determine how rapidly the character can change facing. For example, a character with high mobility can move up to his full Mv and make two facing changes each hex that is entered. Conversely, a character with low mobility can only make a single facing change after moving two hexes in the same direction.

## Combat Step

A combat step is handled slightly differently-it always consists of a single hex of movement and a single hex side facing change. It normally takes one strike rank to perform, but for movement rates less than five it takes as many consecutive strike ranks as needed to reach five feet. That is, 2 SR for Mv 3 or Mv 4, 3 SR for Mv 2 and 5 SR for Mv 1.

Possible Facings for Combat Step


The movement is either forwards or backwards, though it can include a shift to either side. The movement and facing change possibilities are summarized in the Possible Facings for Combat Step figure. Note that the facing change does not have to coincide with the movement though it cannot occur in the same strike rank as the character makes an attack. If the facing change is taken separately then only the middle facing option as shown in the figure is allowed.

## Book Keeping

At the end of each round the bleeding damage from any hits and similar book keeping tasks are resolved.

## Bleeding

A character takes a point of damage to general hit points at a rate determined by the level of bleeding and how long he has been bleeding.

## Melee Attacks

A character who is engaged in melee can make a single attack on his melee strike rank. Such an attack is resolved by comparing his skill score to that of his opponent. The opponent can choose to use Dodge, Shield or skill in a weapon that is ready and has a Parry value greater than zero, but the attacker can only use his skill with the weapon being used to make the attack. In the event that the defen-
der is unable to defend himself (for example, due to lack of tactical awareness) the base difficulty is 1 .

If the attack is a normal success then damage is rolled and taken by the defender. A special success in addition does the special effect for the type of damage. Each level of critical allows the character to choose one of the following: an extra damage roll, halve the defender's effective AP, or select the location struck. A choice can only be selected once per attack so a triple critical results in an extra damage roll, halving the defender's effective AP and allowing the attacker to choose the location struck. In the event of a quadruple critical the character gets the result of a triple critical, plus the choice of another damage roll, halving the defender's AP again, or choosing the sublocation struck.

The result of a miss depends on the type of defense attempted. In the event of a fumble in addition to the result of a "failure" the attacker must make one roll on the fumble table for each level of fumble.

## Parry

A character who is defending himself by parrying with a ready weapon interprets a failed attack as follows.

## Miss

The attacker rolls normal damage, but Parry value is subtracted from it before being taken.

## Failure

If the defense was declared as being "to deflect" then twice the Parry value is subtracted from a normal damage roll. If the defense was declared as being "to riposte" then only the normal Parry value is subtracted, but the defender gets an attack against the attacker in the following strike rank.

|  | Turn Rate |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mobility | $M v 1$ | $1 / 2 M v$ | $M v$ | $11 / 2 M v$ | $2 M v$ | $21 / 2 M v$ | $3 M v$ | $4 M v$ |
| Extremely High | $3 / \mathrm{h}$ | $3 / \mathrm{h}$ | $3 / \mathrm{h}$ | $3 / \mathrm{h}$ | $2 / \mathrm{h}$ | $1 / \mathrm{h}$ | $1 / 2 \mathrm{~h}$ | $1 / 3 \mathrm{~h}$ |
| Very High | $3 / \mathrm{h}$ | $3 / \mathrm{h}$ | $3 / \mathrm{h}$ | $2 / \mathrm{h}$ | $1 / \mathrm{h}$ | $1 / 2 \mathrm{~h}$ | $1 / 3 \mathrm{~h}$ | $1 / 4 \mathrm{~h}$ |
| High | $3 / \mathrm{h}$ | $3 / \mathrm{h}$ | $2 / \mathrm{h}$ | $1 / \mathrm{h}$ | $1 / 2 \mathrm{~h}$ | $1 / 3 \mathrm{~h}$ | $1 / 4 \mathrm{~h}$ | $1 / 5 \mathrm{~h}$ |
| Medium | $3 / \mathrm{h}$ | $2 / \mathrm{h}$ | $1 / \mathrm{h}$ | $1 / 2 \mathrm{~h}$ | $1 / 3 \mathrm{~h}$ | $1 / 4 \mathrm{~h}$ | $1 / 5 \mathrm{~h}$ | $1 / 7 \mathrm{~h}$ |
| Low | $2 / \mathrm{h}$ | $1 / \mathrm{h}$ | $1 / 2 \mathrm{~h}$ | $1 / 3 \mathrm{~h}$ | $1 / 4 \mathrm{~h}$ | $1 / 5 \mathrm{~h}$ | $1 / 7 \mathrm{~h}$ | $1 / 10 \mathrm{~h}$ |
| Very Low | $1 / \mathrm{h}$ | $1 / 2 \mathrm{~h}$ | $1 / 3 \mathrm{~h}$ | $1 / 4 \mathrm{~h}$ | $1 / 5 \mathrm{~h}$ | $1 / 7 \mathrm{~h}$ | $1 / 10 \mathrm{~h}$ | $1 / 15 \mathrm{~h}$ |
| Extremely Low | $1 / 2 \mathrm{~h}$ | $1 / 3 \mathrm{~h}$ | $1 / 4 \mathrm{~h}$ | $1 / 5 \mathrm{~h}$ | $1 / 7 \mathrm{~h}$ | $1 / 10 \mathrm{~h}$ | $1 / 15 \mathrm{~h}$ | $1 / 25 \mathrm{~h}$ |

## Attacking Shields

If an attack is directed specifically at the shield the difficulty is normally unchanged except that any penalty for the size of shield becomes a bonus instead. Further, damage rolled comes directly off of the shield's HP (minus the shield's AP value). The maximum damage per blow is equal to the block value (halved for impaling, doubled for cutting and quadrupled for tearing attacks).

The AP value of shields that are partially wooden can be reduced by one point on a sublocation roll of one through four. This is of course an automatic reduction if the attacker is able to choose the sublocation and desires to do so.

## Shield

A character who is defending himself with a shield interprets the results as follows.

## Miss

The attacker rolls normal damage which is reduced by the shield's AP rating. The maximum damage that can be done is determined by the type of damage. Impaling attacks can do no more than one point of damage, cutting attacks no more than four points and tearing attacks no more than eight points. Other attacks do no more than two points of damage.

## Failure

The attacker rolls normal damage which is reduced by the shield's combined AP and block ratings. If at least one point of damage remains then one point of damage is done to the shield. Cutting attacks can do up to two points of damage and tearing attacks can do up to four points.

## Dodge

A character who is defending himself by dodging interprets a failed attack as follows.

## Miss

The defender takes no damage, but must immediately (in the same SR as the attack) retreat one hex or fall down. Falling down breaks engagement and thus prevents the defender from completing an engagement attack in this round. Retreating does the same if it moves the opponent out of reach unless the character has not already used his combat
step and can advance to within reach in the following strike rank using it.

If the character is unable to move one hex in a single strike rank (Mv $0-4$ ) then there is a chance of falling down due to attempting to backpedal faster than the character can actually do. To avoid falling down requires a roll against the percentage indicated on the Forced Retreat table. If the roll is a fialure the character falls down, on a miss the character is staggered, on a normal success the character lurches and on a special success the character is merely off balance. To be able to retreat without difficulty requires a critical success. The improved percentages can be used if the character spends FP equal to Enc so as to "sprint" for the retreat.

## Failure

The defender takes no damage and does not need to retreat.

## None

If the defender was not actually defending himself then a failed attack is interpreted as follows.

## Miss

The defender takes half damage from a poorly aimed "glancing" blow.

## Failure

The defender takes no damage as the blow completely missed him.

## Combat Modifiers

The circumstances of the combat may indicate modifiers to the attack attempt, either acting as a bonus or a penalty.


| Forced Retreat |  |  |
| :---: | :---: | :---: |
| $M v$ | Normal | Sprint |
| 1 | $4 \%$ | $16 \%$ |
| 2 | $16 \%$ | $64 \%$ |
| 3 | $36 \%$ | $100 \%$ |
| 4 | $64 \%$ | $100 \%$ |


| Size adjToHit |  |
| :--- | :---: |
| Size | adj |
| Extremely Tiny | -21 |
| Very Tiny | -15 |
| Tiny | -10 |
| Very Small | -6 |
| Small | -3 |
| Medium Small | -1 |
| Medium | 0 |
| Medium Large | +1 |
| Large | +3 |
| Very Large | +6 |
| Huge | +10 |
| Enormous | +15 |
| Titanic | +21 |
| Gargantuan | +28 |

## Balance

A character who is knocked off balance is penalized depending on how badly his balance is upset. For game purposes there are three levels of imbalance: Off Balance, Lurch and Stagger.

Off Balance: A character who is off balance has a penalty of -2 for the next action. That is, from the point he becomes off balance until an action is used to regain balance. However, this action can be performed concurrently with other actions.

Lurch: A character who is lurching has his effective movement rate halved and suffers a penalty of -6 until he recovers. To recover from lurching takes one action. He can perform this recovery concurrently with other actions, but if he does so (even to simply move) then he only recovers to Off Balance instead of complete recovery.

Stagger: A character who is staggered cannot move, nor can he act, until he has recovered some of his balance. It takes one action during which he can do nothing else to recover from a stagger sufficiently to only lurch. Thus a staggered character takes at least two actions to completely recover his balance.

## Size

If the defender is not medium size then there is either a penalty or bonus to the attack as given on the Size adjToHit table.

## Position

If the attacker has an advantage of height there is a bonus of 3 . This occurs if the attacker is mounted, the defender is kneeling, or the defender is prone.

## Balance

A character who is off balance suffers a penalty of 2 to any action, whether offensive or defensive, and a character who is lurching has a penalty of 6 . A character who has been staggered cannot act until he has recovered-being staggered effectively prevents a character from defending himself.

## Footing

If the footing is poor then it makes fighting chancier. In general there is a penalty of 3 due to poor footing, though in some circumstances it may have
the additional effect of requiring AGI saves to avoid disaster. In such cases the saving throws are rolled at the beginning of the round.

## Movement

If the attacker does not move in the same strike rank as the attack, but did move in the previous strike rank, he is considered to be "off balance" and has a penalty when making the attack. If the attacker moves in the same strike rank as the attack he is "lurching" and suffers a greater penalty.

If the defender is moving in the strike rank the attack is made then the attack suffers a penalty equal to twice the number of hexes moved. If the movement is less than that possible for the defender it is based on the number of hexes the defender could have moved if he declares it to be rapid movement. For example, a character with Mv 14 who only moved one hex could still cause a penalty of up to 6 .

## Ranged Attacks

A character who is making a ranged attack does so with a base difficulty for the opponent's chosen defense. Unlike melee, however, this is almost always dodge or shield. Only special skills, such as martial arts techniques, allow the use of weapon skills for defense against ranged attacks.

In addition to other modifiers a ranged attack has the difficulty adjusted for distance. At short range there is a bonus of +6 to hit and out to medium range there is no modifier. Each multiple of medium range past medium range is a penalty of 5 to hit. Thus out to triple medium range there is a penalty of 10 to hit.

The level of success in a ranged attack is interpreted the same as for melee attacks. If a ranged attack has been called for a limb then there is a four in six chance that the limb will be struck. When combining this option with a critical success choosing the location the sublocation can simply be selected if it is a "significant" sublocation such as forearm, upper arm, lower leg or thigh. If a "minor" sublocation such as hand, elbow, foor or knee is selected then there is a four in six chance that it is struck-otherwise an adjacent "significant" sublocation is hit.

## Target

The Target skill is used to direct focused mental attention on a target, usually to "hit" with certain spells or psychic powers. Such attacks are resolved the same as any other ranged attack using a short range equal to the square root of the character's vision distance, and a medium range equal to the character's vision distance.

| Vision | Short | Vision | Short |
| :---: | :---: | :---: | :---: |
| 1,2 | $1^{\prime}$ | $111-132$ | $11^{\prime}$ |
| $3-6$ | $2^{\prime}$ | $133-156$ | $12^{\prime}$ |
| $7-12$ | $3^{\prime}$ | $157-182$ | $13^{\prime}$ |
| $13-20$ | $4^{\prime}$ | $183-210$ | $14^{\prime}$ |
| $21-30$ | $5^{\prime}$ | $211-240$ | $15^{\prime}$ |
| $31-42$ | $6^{\prime}$ | $241-272$ | $16^{\prime}$ |
| $43-56$ | $7^{\prime}$ | $273-306$ | $17^{\prime}$ |
| $57-72$ | $8^{\prime}$ | $307-342$ | $18^{\prime}$ |
| $73-90$ | $9^{\prime}$ | $343-380$ | $19^{\prime}$ |
| $91-110$ | $10^{\prime}$ | $381-420$ | $20^{\prime}$ |

For example, if the desired sublocation is the elbow then a roll of one to four indicates the elbow is struck, a roll of five indicates the forearm and a roll of six results in the upper arm being hit.

## Obstructed Fire

If the line of fire is obstructed then the character's attack is penalized. Light cover causes a penalty of 1 for every two hexes, moderate cover is a penalty of one per hex and heavy cover is a penalty of two per hex.

Worse is when another character stands in the line of fire. This increases the complexity of the shot by an amount equal to 4 plus the adjustment for size. Thus shooting past a medium large character in the line of fire introduces a penalty of 5 . If the character is in the hex immediately in front of the character or the target then the penalty is increased by 6 .

If the attack misses the target then each character or hex of cover is considered to see if it took or deflected the hit. In most cases the Random Missile Hit table is used to determine if the missile hit a character, the exception being if the character would have gotten a defense if he had been the target. In such a case an attack score of 1 is used and the attack resolved normally. Light cover has a $4 \%$
chance of being hit per hex, moderate cover a $8 \%$ chance and heavy cover a $12 \%$ chance.

## Morale

A character's Morale Score (MS) is equal to $1 / 10$ his HP times his Discipline skill level. Any damage taken to HP accumulates as points of fear. A character's morale can never be better than that indicated by Morale Score compared to points of fear. The state of a character's morale is one of the following:.
Confident (Fear < MS): The character has self confidence. This is the default condition and there is no penalty.
Disheartened (Fear $\geq$ MS): The character's heart is not in the action at hand which has the effect of penalizing all actions by 2 .

Demoralized (Fear $\geq \mathbf{2} \times \mathbf{M S}$ ): The character is demoralized and will back up if possible (looking for an exit). The character will not initiate any offensive action and any action attempted is at a penalty of 6 .
Scared (Fear $\geq \mathbf{3} \times$ MS): The character is scared and will run away if possible. This means turning and fleeing at the character's movement rate in as direct a fashion as possible away from the situation. The character will only undertake defensive actions which are penalized by 10 .
Terrified (Fear $\geq \mathbf{4 \times M S}$ ): The character is striken with fear and will throw down weapons and attempt to surrender. He will take no combat action: offensive, defensive or otherwise.

## Morale Status

## Fear Status

Confident: No modifiers.
MS Disheartened: -2 peanlty to all actions.
$2 \times$ MS Demoralized: -6 penalty to all actions, will not initiate any offensive action.
$3 \times$ MS Scared: No offensive actions, defensive actions penalized by 10. Must retreat or become Terrified
$4 \times$ MS Terrified: Drop weapons; must surrender or become Petrified.
$5 \times$ MS Petrified: No action possible.
$6 \times$ MS Swoon: Collapses unconscious.

Petrified (Fear $\geq \mathbf{5} \times$ MS): The character is in abject fear and will gibber in terror. In other words the character is completely incapacitated in any functional sense being unable to move or communicate, much less perform combat actions.
Swoon (Fear $\geq \mathbf{6 \times M S}$ ): The character collapses into unconsciousness from fear and stress.

## Taking Damage

When a character takes damage there are several considerations. How much damage was rolled? How much is it reduced by defense? How much is it reduced by armor? What location on the character was hit? What are the character's hit points? How much damage has the character taken previously?

## Special Damage

If the attack was a special success then there is a special effect depending on the type of damage being done.
Brawl Ignore Armor: all points of armor are ignored. This represents the ability of a brawler to inflict damage in unorthodox ways that need not penetrate an opponent's defense.
Chop Staggered: automatic stagger, no saving throw. This represents the heavy impact of a chopping attack.
Cold Icy: half the damage, rounded down, counts as ice instead of cold.

Crush Knockback: use double damage to determine knockback distance. This represents the momentum of a crushing attack.
Cut Bleeding: causes blood loss amounting to one point of damage every minute.
Energy Stuns target into complete inaction for the next four consecutive strike ranks. This represents a severe shock to the nervous system.
Fire Impairing: the wound is an impairing injury in addition to any serious wound result. This represents the effect of heavy scarring in inopportune locations.
Grapple Extra Damage: roll damage an extra time and add. This represents the superior hold obtained or leverage used in applying it.

Heat Burn: half the damage, rounded down, counts as fire instead of heat.
Ice Necrotic: damage cannot be healed normally. This represents the pervasive tissue death that deep and severe cold can inflict.
Impale Puncture: armor points count half normal, rounding down. This represents the superior penetration of a squarely placed piercing blow.
Stun Bludgeon: half the damage, rounded down, counts as crush instead of stun. Three points of damage results in 1 crush and 2 stun. This represents a solid and particularly wellplaced blow.
Tear Double Damage: any damage after armor is doubled. This represents the terrible wounds that can be inflicted by shredding flesh and muscle.

## Rolling Damage

All attacks are rated for an adjusted Strength (adjSTR) that determines the damage dice used. For most weapons the adjSTR is found by multiplying the character's STR with a factor determined by the weapon. For example, a shortsword has a multiplier of $\times 0.8$ so a character with STR 11 wielding a shortsword has adjSTR 8.8.

The damage dice to use for an adjSTR are found on a table. In the previous example the damage

## Ballistic Damage

Fast moving projectiles do ballistic damage. Only every fifth point of damage (rounded normally) is durable, the remainder is stun. So 9 points of ballistic damage becomes 7 stun and 2 points of regular damage. If the attack was a special success then every third point of damage (rounded normally) is durable.

Ballistic damage tends to penetrate armor effectively and has a rating for the number of points of armor required to reduce ballistic damage by one point. Every fifth point of ballistic damage stopped (every third if a special success) becomes one point of stun. Such stun damage is stopped by padding or equivalent protection in excess of the armor required to stop all of the ballistic damage.
would be rolled using 1d10. Tables for weapon damage multipliers and damage dice for adjSTR can be found starting at page .

In some cases a character may roll the damage dice more than once, such as with a powerful attack. To do this roll the damage each time indicated and add them together.

## Defense Reduction

The damage rolled may be reduced by a parry or shield block. The number of armor points (AP) required to stop one point of damage depends on the type of damage. Unless specified otherwise, 1 AP stops one point of damage.

The parry value of a weapon depends on the character's STR and the parry multiplier of the weapon-much like adjSTR. And, like adjSTR, there is a table to interpret the calculated value into the amount of the damage reduction. For example, a character with STR 11 parrying with a shortsword $(\times 0.3)$ would have a parry adjSTR 3.3 which stops 3 points of damage.

## Armor Reduction

The damage a character takes is further reduced by armor. The Armor Points (AP) rating of worn armor directly reduces damage taken. For example, chainmail is rated for 10 AP and would thus reduce damage by ten points.

Some other things, notably defensive magic, may grant the character an AP rating. All AP are considered as a whole when reducing damage so if a character is wearing armor having 6 AP and has a spell cast on him giving 3 AP then damage is reduced by nine points.

## Blood Loss

A character who is injured often bleeds whether internally or externally. A normal wound has a fractional blood loss indicated by $1 / 3$. It does not add to other levels of blood loss. The level of bleeding is increased by one for serious wounds, head wounds and critical injuries. Thus a critical injury to the head inflicted with a cutting weapon having achieved a special success in the attack inflicts four levels of bleeding.

The level of blood loss and the damage accumulated from blood loss indicate the rate at which damage from blood loss accumulates. All

## Damage Reduction

Unless specified otherwise, one point of armor stops one point of damage. Exceptions and special rules are as follows:

Crush: every second point of damage stopped becomes one point of stun. Stun generated in such fashion is stopped by padding AP in excess of armor required to stop all of the crush damage.

Cut: one point of armor stops two points of damage.

Energy: metal armor is ignored.
Grapple: armor has no effect due to the nature of the "damage."

Impale: two points of armor are required to stop one point of damage.

Tear: one point of armor stops four points of damage.

Thermal: cold, fire, heat, ice damage ignores metal and accumulates against other armor.
blood loss is considered its own wound for healing purposes. For example, a character with three levels of bleeding who has taken more than his HP in blood loss damage accumulates a point of blood loss every minute. A character cannot lose more than triple his HP to blood loss.

## Hit Location

It is often of interest just where the character was hit. If advanced rules where armor can vary by hit location are used this is necessary to determine the AP to be used in reducing the damage. In the event that the wound turns out to be serious it is necessary to know the location that has been disabled.

The hit location is determined by rolling 1 d 20 and consulting the appropriate table. For humans and human-like characters-such as elves, dwarves and halflings - the Human hit lcoation table is used

| Blood Loss |  |  |  |
| :---: | :---: | :---: | :---: |
| Level | up to HP | $2 \times H P$ | $3 \times H P$ |
| $1 / 3$ | 15 minutes | 30 minutes | 1 hour |
| 1 | 5 minutes | 10 minutes | 20 minutes |
| 2 | 1 minute | 2 minutes | 4 minutes |
| 3 | 5 rounds | 1 minute | 2 minutes |
| 4 | 3 rounds | 5 rounds | 1 minute |
| 5 | 1 round | 3 rounds | 5 rounds |

with the column determined by the type of attack. Ranged attacks of whatever sort used the Range column while melee attacks use the Melee column. Unarmed attacks-such as punch, kick, brawl and grapple-use the Unarmed column.

Characters with substantially nonhuman features-such as pixies having wings, lizardmen having tails and centaurs having the bodies of horses-have their own tables. The centaur hit location table has additional columns for side and rear attacks. These are used whether the attack was ranged, melee or unarmed. Additional hit location tables are provided for the most common body types: horse, wolf, spider and so on.

## Sublocations

As an advanced rule a sublocation may be determined by rolling 1 d 6 and consulting the sublocation table for the general location already determined. Some armor may only cover specific sublocations or leave specific sublocations unprotected. The use of sublocations is optional.

## Serious Wounds

If the damage done, after reducing for defense and armor, equals or exceeds the character's Serious Wound Level then the injury is considered to be especially serious. As such the injured location is considered to be incapacitated and has the level of bleeding increased by one.

Head. A serious wound to the head leaves the character unconscious.

Chest. Character loses use of arms and cannot speak. All actions that are still possible have a penalty of 6 .

Abdomen. Character loses use of legs and cannot stand.

| Hit Location |  |  |  |
| :--- | :---: | :---: | :---: |
| Location | Unarmed | Melee | Ranged |
| Head | 19,20 | 19,20 | 19,20 |
| Left Arm | $16-18$ | 17,18 | 17,18 |
| Right Arm | $13-15$ | 15,16 | 15,16 |
| Chest | $10-12$ | $11-14$ | $12-14$ |
| Abdomen | $7-9$ | $7-10$ | $9-11$ |
| Left Leg | $4-6$ | $4-6$ | $5-8$ |
| Right Leg | $1-3$ | $1-3$ | $1-4$ |

Shoulders and Hips
Although the shoulder is considered to be part of the chest and the hips to be part of the abdomen they can only be hit by aiming for a limb and achieving a sublocation hit. In the case of the shoulder an arm must be hit and in the case of the hip a leg must be hit.

If this rule is in effect then the normal sublocation rules are changed and for arms and legs 1 d10 is rolled, consulting the following table.

| Roll | Arm | Leg |
| :---: | :--- | :--- |
| 1 | Hand | Foot |
| $2-4$ | Forearm | Lower Leg |
| 5 | Elbow | Knee |
| $6-8$ | Upper Arm | Thigh |
| 9,10 | Shoulder | Hip |

Arm. Character loses the use of the arm and drops anything held in that hand.

Leg. Character loses the use of the leg and falls excepting a successful AGI/20 saving throw. Even if the character manages to stand movement is only possible through hopping which quarters normal movement rate. Characters having four legs only need to make an AGI/10 saving throw if moving (AGI/20 if sprinting) on the loss of the first leg and have movement halved instead of quartered. Losing two legs on opposite sides (front left and back right, or front right and back left) require an $\mathrm{AGI} / 20$ saving throw and quarters movement even if successful. Six-legged creatures are generally not impaired by the loss of a single leg.

## Incapacitating Injuries

If the total of all damage taken by a character equals or exceeds his hit points then he falls unconscious.

## Knockback

## Sublocation Table

| 1d6 | Head, front | Head, back | Arm | Leg |
| :---: | :--- | :--- | :--- | :--- |
| 1 | Throat | Neck | Hand | Foot |
| 2 | Face | Skull | Forearm | Lower Leg |
| 3 | Face | Skull | Forearm | Lower Leg |
| 4 | Skull | Skull | Elbow | Knee |
| 5 | Top | Top | Upper Arm | Thigh |
| 6 | Top | Top | Upper Arm | Thigh |

Any blow that does enough damage will knock the opponent back. For each multiple of damage as found on the Knockback table crossreferencing the target's size with the type of damage done the target is knocked back one hex. If at least one half the listed damage is done the target is knocked back in his own hex. All damage that is not deflected is considered when determining knockback distance. Wearing armor protects from injury, but not from being knocked back.

A character who is knocked back must make an AGI saving throw to keep his balance. The difficulty is 3 if only knocked back in the same hex, otherwise it is equal to five times the number of hexes he is knocked back.

Success Result
Critical None
Special Off Balance
Normal Lurch
Miss Stagger
Failure Fall to ground, staggered
Fumble Uncontrolled fall, damage as if 10 feet
Fumble ${ }^{2}$ Uncontrolled fall, damage as if 20 feet
Fumble ${ }^{3}$ Uncontrolled fall, damage as if 30 feet

## Advanced Melee Combat Rules

In addition to the advanced options for the rules already presented as sidebars the following constitute a set of options that a referee may choose to allow in the game. Although they add interest they do increase the complexity of combat and each should be considered separately for inclusion.

## Charge

A character can charge an opponent and attack by the simple expedient of moving forward and making a wild attack. However, if he can manage to move fast enough he can get a bonus to damage.
The damage from a charge attack is determined by averaging STR with Mv and so is only worthwhile if Mv exceeds STR. Keep in mind the penalty to attack for moving in the same strike rank as the attack, or in the strike rank previous to the attack.

## Disarm

A character can attempt to disarm an opponent by striking at his weapon so as to knock it out of his grasp instead of an otherwise available attack. Such

| Knockback |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Size | Crush | Chop/Stun | Cut/Tear | Impale |
| Ext. Tiny | 1 | $11 / 2$ | $21 / 2$ | 3 |
| Very Tiny | $11 / 2$ | 212 | 3 | 5 |
| Tiny | $21 / 2$ | 3 | 5 | 8 |
| Very Small | 3 | 5 | 8 | 12 |
| Small | 5 | 8 | 12 | 18 |
| Med. Small | 8 | 12 | 18 | 27 |
| Medium | 12 | 18 | 27 | 40 |
| Med. Large | 18 | 27 | 40 | 60 |
| Large | 27 | 40 | 60 | 90 |
| Very Large | 40 | 60 | 90 | 133 |
| Huge | 60 | 90 | 133 | 200 |
| Enormous | 90 | 133 | 200 | 300 |
| Titanic | 133 | 200 | 300 | 450 |
| Gargantuan | 200 | 300 | 450 | 675 |

an attack is made normally, although adjusted for the size of the weapon being attacked. A close reach weapon is attacked with a penalty of 10 , a short reach weapon with a penalty of 6 , a medium reach with a penalty of 4 and a long reach with a penalty of 2. Polearms and the like are attacked with normal chance to hit. Damage is rolled and compared to the defender's STR on the resistance table with the level of success indicating the distance in hexes the weapon is knocked (using a random direction). On a miss the defender loses his grip and must spend one action regaining it or drop it in his hex. A skilled defender may choose to to make a counterattack as per the opportunity attack rules, using a shield to defend against the disarm attempt. For a dodge to be effective against an attack to disarm the defender must always retreat.

## Fast Draw

A weapon that is reasonably handy can be readied with a single action. However, characters who are skilled or in a rush can do so more quickly. If a character has at least skill score 24 or expends 1 FP then the weapon can be utilized after 2 SR. If a character has at least skill score 24 and expends 1 FP then the weapon can be utilized after 1 SR.

In the event of a fast draw it is not considered to be separate action-after all the weapon was drawn to be put into use-and represents a strike rank penalty for the action to be attempted.Consequently
a weapon cannot normally be drawn for use in a reflex action such as a parry. There are exceptions, such as declaring the fast draw attempt at the beginning of the round in which case the base strike rank is the greater of 11 and the character's normal strike rank with the weapon. Another exception is when a character has advance warning of an attack, as with the Zanshin martial arts technique. In such a case the character can parry if the fast draw strike rank penalty is offset by the strike rank advance warning afforded by the technique.

Missile weapons requiring two actions to ready, such as a bow where the arrow must be drawn then nocked, only have the time for the second action (readying the missile launcher) reduced by skill. Thus to ready a strung bow normally takes two actions ( 8 SR ), but an archer can do so with a 4 SR penalty by expending 2 FP (one for drawing the arrow and the second for knocking it) -and one with Archery 24 or higher can do so with a 3 SR penalty by expending 2 FP . When snap shooting this results in maximum rates of fire of 3 arrows per round and 4 arrows per round, respectively-though incurring 6 FP and 8 FP for doing so.

## Feint

When fighting a character of equal or lesser skill rank (the opponent's skill declared for defense is the one considered) feinting can be employed to create an opening in the opponent's defense. This works by delaying the attack a chosen number of strike ranks, though the attack must occur no later than SR 0 .

Each strike rank the attack is delayed reduces the opponent's skill score for defense by one plus the difference in skill ranks. The opponent's skill score cannot be reduced below half no matter how large the difference in skills is, or how many strike ranks are spent creating an opening.

For example, a character with skill score 20 is fighting a character with skill score 10 . Having a normal SR 4 he chooses to delay it by 2 SR for a total penalty to defense of 6 . Because the defense skill score cannot be reduced below half it is only dropped to 5.


## Morale

If a character takes $1 / 3$ Morale Score or more points of damage in a single attack which did not otherwise cause a loss of morale then his morale status drops by one level. For example, a confident character will become disheartened. Similarly, a single attack doing Morale Score points of damage must drop the character's morale status by two levels, one that does at least double Morale Score points of damage by three levels, and so on.

## Morale Check

In addition to damage, other events or conditions may reduce morale score or limit the character's morale state. In particular, encountering the undead or entities of pure evil may invoke a morale check. The level of success in the morale check is used to determine the effect on the character's morale status.

The level of failure indicates the number of levels of morale the character drops; that is, a miss causes the loss of one level of morale, a failure two
$\left.\left.\begin{array}{|ll|}\hline \begin{array}{l}\text { Success } \\ \text { Critical }\end{array} & \begin{array}{l}\text { Morale Check } \\ \text { Result }\end{array} \\ & \begin{array}{l}\text { If morale is less than the limit dictated } \\ \text { by damage as compared to Morale } \\ \text { Score it is increased by up to three } \\ \text { levels }\end{array} \\ \text { Critical }^{2} & \begin{array}{l}\text { If morale is less than the limit dictated } \\ \text { by damage as compared to Morale } \\ \text { Score it is increased by up to two }\end{array} \\ \text { levels }\end{array}\right\} \begin{array}{l}\text { If morale is less than the limit dictated } \\ \text { by damage as compared to Morale } \\ \text { Score it is increased by one level }\end{array}\right\}$
levels, and so on. On a special success if the character is less than confident he becomes foolhardy. A foolhardy character loses all penalties until the next morale check or morale score is lowered. If a character's morale status is less than that required by the amount of damage taken as compared to the character's Morale Score then each level of critical success can improve the morale status by one level. For example, if the character has taken damage equal to Moral Score but had subsequently been lowered to demoralized without further damage then a triple critical in a morale check would restore him to disheartened.

If an encounter requires a morale check and the character loses morale status as a consequence then he will start any new encounter with the same type of creature with a morale status no better than what the previous encounter ended with. This lasts until he ends an encounter with confidence.

For example, if a character encounters skeletons and because of the morale check becomes demoralized and he flees then any time he encounters skeletons again he will be demoralized simply by the encounter until he successfully faces and defeats them. Note that if a character was terrified by an encounter with a great demon and then encountered skeletons he would have to make a morale check. Even if he lost no further morale he

## Morale Status

Fear Status
Confident: No modifiers.
MS Disheartened: -2 penalty to all actions.
$2 \times$ MS Demoralized: -6 penalty to all actions, will not initiate any offensive action.
$3 \times$ MS Scared: No offensive actions, defensive actions penalized by 10 ; must retreat or make Discipline roll to avoid becoming Terrified.
Cornered: Offensive actions at normal chance, no defensive actions.
$4 \times$ MS Terrified: Drop weapons; must surrender or make Discipline roll to avoid becoming Petrified.
Frantic: Brawl only, but at +10 .
$5 \times$ MS Petrified: No action possible.
$6 \times$ MS Swoon: Collapses unconscious.
would become terffied on meeting skeletons until defeating some. This occurs because of association with the more demoralizing threat.

## Fight or Flight

A character who is scared or terrified must attempt to run away. If this is not possible then he must make an immediate Discipline / 10 roll. If successful he remains at his present state of morale, regardless of his inability to retreat. If the roll is a failure then he drops to the next lower morale status. A character who is scared and misses the Discipline skill roll becomes Cornered while a terrified character who misses the skill roll becomes Frantic.

A character who is cornered feels that he has run out of options and will only undertake offensive actions, and those at full chance. The only nonoffensive action allowed is movement to charge an opponent. A cornered character remains in this state until all opponents are defeated, the character collapses from exhaustion or the character becomes Terrified.

A Frantic character has been pushed beyond endurance and out of desperation will move to the nearest opponent and Brawl at +10 . The character

## Shock of Injury

As an optional rule a character who has been injured is penalized from the shock of being hit. The penalty is equal to the damage done, adjusted for the character's size, and lasts until four consecutive strike ranks have occured. Thus if a character is hit in $S R 2$ he will carry the penalty through the end of that round and for the first $4 S R$ of the following round (that is, SR 11, 10, 9 and 8-as well as on any strike rank higher than 11).

The adjustment for size is the inverse of the HP multiplier for size and should be rounded normally. Thus a medium small character being hit for 5 points of damage would suffer a penalty of $6^{2} / 3$, or 7. A medium large character taking the same hit would only suffer a penalty of $31 / 3$, or 3 . Who says size doesn't matter?

The exception are spirits and the undead. Even should a spirit take "damage" it is not a physical entity and thus not subject to any sort of systemic shock. Similarly, an undead creature is immune to shock of injury.

## Combat

suffers no penalty from fatigue excepting for LFP exceeding END and will collapse when FP reach twice END. A Frantic character remains so until all opponents are defeated, the character collapses from exhaustion or the character Swoons.

## Exhort

To rally demoralized troops requires use of the Leadership skill. For small scale combat a character can exhort others to action by making a Leadership skill roll, able to affect as many other characters as he can organize (see the Skills chapter of Book 1 for more information on how many can be organized). It takes an entire round, during which only reflexive actions can be attempted, to attempt to rally.

The difficulty of the rally roll depends on how desperate the situation is. If both sides are approximately equally matched then the difficulty is 10 . If successful then the morale status of all affected is raised to its limit based on Fear. In the event of a special success all affected become Foolhardy, and each level of critical success is a bonus to all actions while Foolhardy. A miss has no particular effect while a failure reduces the leader's morale status by one level. Each level of fumble reduces not just the leader's, but the morale status of everyone affected.

A character can also attempt to give "pep talks" before engagement. The same rules are used,

## Opportunity Attack Advantages

An opportunity has a number of advantages equal to the difference in skill rank. The options available to an opportunity attack are as follows. Each one requires the expenditure of an advantage.

Powerful Blow: this option allows an additional roll of damage. It can only be taken once per attack that is part of the opportunity attack.

Called Shot: this option allows the attacker to choose the location struck if the attack is successful. That is: head, chest, abdomen, left arm, etc.

Strike Before: this option increases the SR of the opportunity attack by one. It can be taken multiple times.

Additional Attack: this option allows an additional attack (for which an advantage may be used to give it its own powerful blow) following the opportunity attack (or last extra attack) by $1 S R$.
though the effect will disappear in skill level minutes if the characters are not engaged. Further, repeated pep talks have diminishing effectincrease the difficulty by the number of pep talks attempted in the last week.

## Mounted Combat

A character who is mounted may get a bonus to hit from advantage for height, but his weapon skill scores cannot exceed his Ride skill. For example, a character attempting to fight from horseback who has Ride 12 and Sword 1-H 18 fights with a skill score of 12 -including the reduced strike
 rank.

## Opportunity Attack

Some events result in an opportunity for a character to make a melee attack. For example, if an opponent attempts to advance closer than the engaged reach of the character, if the opponent makes a normal (non-opportunity) attack, or if the opponent turns to run (as opposed to retreating to break the engagement and then turning and running). In such cases the base difficulty for the attack is equal to half the defender's skill score in the form of defense attempted.

Note that if the opponent is attacking and the skill ranks are the same then both combatants have their defense skill scores halved.

When making an attack of opportunity the difference in skill ranks is the number of advantages. For example, if a character whose skill rank is 1 attacks a character whose skill rank is 3 allows an attack of opportunity with two advantages. A character can get additional advantages based on the situation. For example, if the opponent must be within reach of the character's weapon before he can make an attack of his own and has been engaged then advantage is increased by the number of hexes difference between the reaches.

Each advantage can be used to do one of the following: make an additional attack, call the location to be struck, make a powerful blow, or strike before the opponent's attack. A powerful blow can only be taken once per attack made as part
of the counterattack and results in an extra roll of damage. Each time "strike before" is selected the strike rank for the counter attack is increased by one. Each additional attack occurs one strike rank after the one which preceded it.

For example, a character with skill rank 0 attacking another with skill rank 5 would provide five advantage points to the higher skilled character. This could be used to make the counterattack occur 5 SR before the lesser skilled character's attack; to allow two additional attacks, all three occuring before the lesser skilled character's attack; to make two counterattacks, both of which are powerful blows to called shots, though the second counterattack will occur in the strike rank following the lesser skilled character's attack; or some other combination.

## Posture

A character's overall posture affects his base movement rate. The default assumption is that the character is standing, but if not his move will be reduced. Further, it takes time to change posture-dropping is quick, but getting back up is slower. Acrobatics can be used to improve this. There are seven basic postures: standing, kneeling, sitting, squatting, tailor, prone and supine.

It takes one action to change from one posture to another, though standing from prone or supine in one action takes 1 FP. To change in two strike ranks takes additional fatigue for the character's encumberance level. A character who is attempting to change posture as fast as he can may make an

| Changing Posture |  |
| :--- | :--- |
| Success | Result |
| Critical $^{3}$ | Takes 1 SR, Enc - 4 FP |
| Critical $^{2}$ | Takes 1 SR, Enc - 3 FP |
| Critical | Takes 1 SR, Enc - 2 FP |
| Special | Takes 1 SR, Enc - 1 FP |
| Normal | Takes 2 SR, Enc - 1 FP |
| Miss | Takes 2 SR, Enc FP cost |
| Failure | Takes 1 action |
| Fumble | Takes 1 action, strain muscle |
| Fumble | Takes 1 action, sprain joint |
| Fumble $^{3}$ | Fall down, damage as for ten foot fall |

Acrobatics skill roll with a difficulty as for the character's level of encumberance.

On a normal success it reduces the fatigue cost by one, and on a special success it halves the time. Each level of critical success further reduces the FP cost by one point. Thus an unencumbered character going from supine to standing can do so in one strike rank without paying any fatigue if he rolls a critical success. If the Acrobatics roll is a miss then there is no effect, ill or well, from the Acrobatics. If the roll is a failure the character expends full fatigue and takes the full time. A fumble indicates he strains a muscle, a double fumble indicates a sprain, while a triple fumble indicates a bad fall taking damage as for a ten foot fall.

Kneeling: a character who is kneeling can move at a crawl of $1 / 4 \mathrm{Mv}$ or walk on his knees at $1 / 8 \mathrm{Mv}$.

Prone: a character who is lying on his belly can move at a crawl of $1 / 8 \mathrm{Mv}$.

Sitting: a character who is sitting on the ground with his legs extended in front of him cannot move.

Squatting: a character who is on his feet with his knees deeply flexed is considered to be squatting and can "duck walk" at $1 / 4 \mathrm{Mv}$.
Standing: a character who is standing can move normally.
Supine: a character who is lying flat on his back cannot move.

Tailor: a character who is sitting with his legs crossed cannot move.

## Pull Blow

A character can pull a blow so as to do less damage by declaring this intent as part of his attack. A pulled blow normally does half damage, but if the player so desires it can be declared to do a single point of damage per damage roll that would be made. However, in such a case the defender has a bonus of 6 due to the slowness of the attack.

## Pushing Around

It is possible to push an opponent around. There are three ways this can be done: press, rush and slam. A press is an impressive and intimidating onslaught calculated to cause the defender to give ground. A
rush is a charge into the defender's hex calculated to intimidate him into giving round. A slam is a charge into the defender's hex with the intent of physically forcing the defender to give ground.

## Press

A press attack can be done instead of the attacker's normal melee attack, an opportunity attack or a wild attack. It is resolved by matching the attacker's STR plus Intimidate skill level plus [Weapon] skill level against the defender's WIL plus Discipline skill level plus [Weapon] or Shield skill level. Note that if either the attacker or the defender is not medium size then his respective score is adjusted as for HP. The level of success is the number of hexes the defender gives ground. In the event of a failure the defender gets an opportunity attack. In addition, a fumble is resolved on the Melee Fumble table.

The defender must move to satisfy the result of the push as soon as possible-normally in the SR of the press attack. If the press SR is greater than 10 movement still does not start until SR 10. If the press SR is 0 then movement is deferred until SR 10 of the following round.

If the defender cannot move fast enough to satisfy the press in a single SR he must make a roll to avoid falling down, the same as for a forced retreat when dodging. If the defender is still on his feet and the attacker has followed then the defender must continue to backup in the following strike ranks until either he falls down, the press distance is satisfied or the attacker fails to follow through.

If the defender cannot move back due to an obstacle, such as a wall, then the attacker has an immediate opportunity attack.

## Rush

A rush attack is declared as part of the attacker's movement and is resolved by matching the attacker's STR plus Intimidate skill level against the defender's WIL plus Discipline skill level. If either the attacker or defender are not medium size their respective score is adjusted as for HP . A rush is then resolved just like a press attack with the following exceptions.

If the rush attack is a miss (or worse) then the defender gets an immediate opportunity attack and
the movement into the defender's hex only occurs if the defender so wishes.

If the rush attack is a failure (or worse) then he must make an $\mathrm{AGI} /(5 \times$ level of failure $)$ roll to avoid falling down. That is, a fumble would be an AGI/10 roll. Even if the attacker does not fall down he is off balance unless he gets a special success.

## Slam

A slam attack is resolved with the Brawl skill. If the defender succeeds in a Discipline skill roll against the attacker's Intimidate skill score he gets an opportunity attack before the slam itself is resolved. There is no defense against a slam attack except to dodge.

If the slam succeeds then the attacker succeeds in planting a shoulder into the defender doing damage as for a brawl attack using adjSTR of STR averaged with Mv. A successful slam has a knockback score equal to the damage rolled considered Crushing for knockback purposes. If the slam attack was a special success then the knockback score is doubled instead of the usual result for a brawl attack.

## Stuck Weapons

A weapon is considered to be stuck if it meets any of the following criteria: weapons designed to stick, tearing or impaling attacks which get a special success, chopping atacks that do serious wounds, cutting or crushing attacks that do HP in damage to the head or torso, or damaging inanimate objects for $1 / 2 \times$ STR or more damage.

| Stuck Weapon |  |  |
| :--- | :---: | :---: |
| Size | Limb | Head or Torso |
| Tiny | 1 | 2 |
| Very Small | 2 | 4 |
| Small | 3 | 6 |
| Medium Small | 4 | 8 |
| Medium | 5 | 10 |
| Medium Large | 6 | 12 |
| Large | 8 | 16 |
| Very Large | 10 | 20 |
| Huge | 12 | 24 |
| Enormous | 14 | 28 |
| Titanic | 16 | 32 |
| Gargantuan | 20 | 40 |

## Tim Doty

In some cases an attack may be exempted. Chopping attacks to limbs or the head that do $2 \times$ HP damage to the limb (or HP damage in the case of minor limbs) are considered to sever the limb and thus not be stuck. Tearing attacks to limbs or the head that do $8 \times$ HP damage to the limb are considered to have ripped the limb off and so are not stuck. Blows to the torso are also exempt if they do five times the exemption damage for a limb.

The attacker gets an immediate STR + [Weapon] skill level resistance roll to free the stuck weapon. To continue with actions in the same SR, as for rune masters, a special success must be achieved. Otherwise the weapon is not considered to be freed until the following SR.

Any character who has a grip on the weapon can spend one action trying to free it. At the end of the action a STR resistance roll is made. If the character is able to brace against whatever the weapon is stuck in (for example, a fallen foe after the battle is over) then is STR is effectively doubled. Due to problems with leverage the defender has his STR halved for purposes of freeing the weapon.

For weapons stuck in creatures the resisting score is the lesser of damage stopped by armor plus wound damage and a score based on size and multiplied by critical hit level. For weapons stuck in inanimate objects the resisting score is simply damage.

For example, Brand hits Günnar with his axe in the chest for 12 points of damage. Günnar is wearing ringmail so he only takes 7 points of damage, but that is still a serious wound. Brand must now make a STR/10 ( 5 stopped plus 7 wound is 12 , the maximum for a torso hit to a medium sized creature is 10) resistance roll to free his axe.

| Whips |
| :--- |
| A whip is most effective at the extremity of its |
| range with the difficulty increasing the closer the |
| target is. To this end the following table is used: |
| Length |
| Lehex |
| $4{ }^{\prime}$ |
| $8^{\prime}$ |

A whip is most effective at the extremity of its range with the difficulty increasing the closer the target is. To this end the following table is used:

## Two Weapon Fighting

A character desiring to fight with a weapon in each hand has two basic options. A one-handed weapon skill is normally for the dominant hand, but the player can specify that it is for the character's off hand. Thus a character can learn Sword 1-H and Sword 1-H Left Hand. These are different skills, each with the same difficulty.

While the above allows a character to wield a sword in either hand he cannot fight with both weapons at the same time-the skills do not confer the necessary coordination and techniques. He could attack with one and parry with the other, but he could not attack with both. To do that requires something more.

Actually, a character can attack with both in the round, but only as wild attacks-he loses the ability to properly engage his opponent in melee if he does so. To be able to engage in melee and attack with both weapons requires the martial arts Two Weapon technique.

Using a weapon in an off hand increases the required STR by $50 \%$. This compensates for STR being an overall rating and characters typically having less strength in their off hand.

## Weapon Reach

The distance at which a melee weapon is effective depends on its reach. If the target of the attack is closer or farther away then the effectiveness of the attack is impaired. A target that is too close has a peanlty to be hit, while a target that is too far away may require a lunge to hit.

In the case of a lunge the attack is not only penalized in the chance to hit, but also is delayed by one strike rank for the lunge to occur. Further, the

| Penalty for Reach |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Reach | Contact | Same | 1 Hex | 2 Hex | $3 H e x$ |
| Close | -6 | 0 | $-6 \dagger$ | - | - |
| Short | -10 | -2 | 0 | - | - |
| Medium | -20 | -6 | 0 | - | - |
| Long | -30 | -10 | 0 | $-6 \dagger$ | - |
| Polearm | - | $-20 \ddagger$ | $0 \ddagger$ | $0 \ddagger$ | - |
| Extreme | - | - | $-10 \ddagger$ | $0 \ddagger$ | $0 \ddagger$ |
| $\quad \dagger$ Lunge: -1 | SR, -6 defense for one action |  |  |  |  |
| $\quad \ddagger$ Shift Grip: one action to change grip |  |  |  |  |  |

character "lurche" unless his skill score is 18 or more, in which case he only becomes off balance.

Some weapons require the grip to be shifted to use them at different reaches-doing so takes one action unless the character has skill score 18 or higher in which case it only takes 2 SR.

## Wild Attack

A character can always choose to start swinging in SR 11 regardless of engagement or strike rank. The difficulty of connecting with a wild attack is determined normally. However, attempting a wild attack makes the character completely open giving any opponent choosing to counterattack an opportunity attack with difficulty 1 (a character cannot defend himself properly while making a wild attack) and a number of opportunity advantages equal to the difference in skill rank with the proviso that the "strike before" option cannot be taken. The counterattacker is himself open to attack per the normal rules for someone making an attack of opportunity.


## Advanced Ranged Combat Rules

In addition to the advanced options for the rules already presented as sidebars the following constitute a set of options that a referee may choose to allow in the game. Although they add interest they do increase the complexity of combat and each should be considered separately for inclusion. There are some situations not covered by the basic rules, particularly with regard to ranged attacks. These rules remedy that omission.

## Cluster Hits

Some attacks consist of numerous projectiles launched simultaneously and comprising a single attack roll. In such cases the number of projectiles that hit depend on how closely the projectiles hang together and the distance from the point of the attack's origin to the target. This distance is effec-
tively tripled in the event that a limb is struck and quintupled in the case of attacks hitting a minor limb. For game purposes there are three categories describing how closely the projectiles cluster: tight, normal and open choke.

Using a "cluster" attack gives a bonus to hit and has the possibility of hitting with none, one or more of the projectiles. A "tight" choke gives a bonus of 3 , a normal choke gives a bonus of 5 and an "open" choke gives a bonus of 8 .

To determine how many projectiles hit the range to the target, the target's size, the "choke" and the number of projectiles must be considered. The target's size, if other than medium, adjusts the effective range. This effective range is then cross referenced with the choke using the Cluster Shot master table to determine the percentage of the particles that hit. Multiply the percentage by the number of projectiles to find the number that hit. To facilitate play tables are provided that eliminate the need to multiply the percentage of projectiles that hit. This has the added benefit of minimizing the effects of rounding.

## Long Range Shots

The more distant the target the higher arcing the missile's trajectory must be to reach it. The minimum ceiling is given below. Past half the weapon's maximum range the missile has slowed so much that it does half damage to the target (and if it were to strike something at the height of its arc it would do very little damage at all).

Out to one quarter maximum range the minimum ceiling is eight feet. Out to one half maximum range the minimum ceiling is fourteen feet. Out to three quarters maximum range the minimum celing is at least fourteen feet and no less than one tenth the maximum range. The minimum ceiling increases to one fifth the maximum range at $90 \%$ of

the maximum range and at maximum range itself the minimum celing is one third the maximum range. This is summarized in the Long Range Ceiling table.

## Misses, or, Where Did My Arrow Go?

If a ranged attack does not succeed that leaves the location of the missile an open question. This can be of great concern to those in the vicinity of the intended target.

If the attack was successfully evaded but otherwise a success (not a failure or a fumble) then it is a given that it reached the target and entered the target's hex. If the target's hex is occupied by anyone or anything other than the target itself then it is possible that that person or thing was struck. Use the Random Missile Hit table to determine this.

If the attack was not successful and the chance to hit was penalized due to characters or objects in the way then, starting with the one closest to the attacker, it should be determined if the missile hit them. In the case of cumulative generic penalties, such as firing in the woods, simply roll 1d100 against that penalty to determine if the missile failed due to such interference.

If the attack was otherwise not successful then a 1 d 6 is rolled to see in what direction the missile scatters. How far its landing place is removed from the intended target depends on how badly the attack missed and the direction of scatter.

| Random Missile Hit |  | 1 |
| :---: | :---: | :---: |
| Size | Hit on | 6 |
| Extremely Tiny | - |  |
| Very Tiny | 1\% |  |
| Tiny | 2\% |  |
| Very Small | 4\% | 4 |
| Small | 8\% |  |
| Medium Small | 16\% |  |
| Medium | 32\% |  |
| Medium Large | 64\% |  |
| Large | 84\% | 1 |
| Very Large | 92\% | E) |
| Huge | 96\% | ( \% |
| Enormous | 98\% | 24) 9 |
| Titanic | 99\% | 0 |
| Gargantuan | 100\% | - |

## Time of Flight

For those desiring some additional realism the time delay between a ranged attack and when it hits can be estimated as follows: if the target is less than $10 \%$ of the maximum range (at least 20 feet) from the attacker then the missile strikes in the same $S R$ as the attack is made. It travels an additional $10 \%$ of the maximum range every $S R$. Thus a crossbow with a maximum range of 700 feet fired at a target 200 feet distant would hit the target $2 S R$ after being released (to 70' in the same $S R$, to 140 ' in the following $S R$ and to $210^{\prime}$ in the final $S R$ ). If the target is aware of the attack and tracking the missile (it is visible to him and he is using one of his Tactics skill levels to track it) then it will automatically miss if he takes evasive action of at least one hex per level of success.

## Rapid Fire

Some attacks consist of multiple projecties launched in series and comprising a single attack roll. In such cases the number of projectiles that hit depend on the range from the origin of the attack to the target, the target's size, how controllable the attack is, the rate of fire and how many projectiles were launched. The rate of fire and controllability of the attack are combined into a single factor termed the Control Rating.

To find the maximum distance at which a given number of shots will hit consult the Rapid Fire table, cross-referencing the number of shots launched with the Control Rating. To find the maximum number of shots which will hit at a give range use the column for the Control Rating and read down until the lowest number equal to or greater than the range is reached. Follow that line to the left to determine the maximum number of hits.

| Missile Scatter |  |  |
| :--- | ---: | ---: |
| Failure | $1,2,6$ | $3,4,5$ |
| Miss | 1 s 6 hexes | 1 hex |
| Failure | 1 d 6 hexes | 1 s 6 hexes |
| Fumble | 1 d 10 hexes | 1 s 10 hexes |
| Fumble $^{2}$ | +10 hexes | 1 d 10 hexes |
| Fumble $^{3}$ | +20 hexes | +10 hexes |

A character can, when making declarations for the round, specify that he is trying to control the weapon. In such a case a special success with a rapid fire attack halves the effective Control Rating instead of achieving the normal effect of a special success for the type of damage involved.

If the location struck by the attack is a limb then the effective distance is tripled. Minor limbs quintuple the effective distance.

## Shooting Upwards

A missile can be fired at a target substantially above the character, but only out to half the weapon's maximum range and against a target no higher than half the weapon's maximum range. In addition the attack will do less damage if the target is more than $1 / 8$ the weapon's maximum range above the character. The missile may go slightly higher than half the weapon's maximum range, but at that point it is moving too slowly to do any damage at all.

| Shooting upwards |  |
| :--- | :--- |
| Damage | Height |
| Full | Up to $1 / 8$ maximum range |
| Half | Up to $1 / 4$ maximum range |
| Quarter | Up to $3 / 8$ maximum range |
| None | Up to $1 / 2$ maximum range |

## Caltrops

This describes any sharp objects at ground level that would be injurious to someone stepping on them. The classic form is a four pointed object-the design means that no matter how they fall when scattered three of the points will be down and provide seating for the fourth, upward facing, point. One way to make such a weapon is to bend two nails and weld them together at the bend point. The heads would then be snipped and sharpened.


The damage done by a caltrop depends on how deeply it penetrates and how large the wound is. The depth of penetration is largely determined by size and, to an extent, movement rate. Larger creatures step with greater momentum and the faster a creature travels the heavier its footfalls. The size of the wound is determined by the size of the caltrop. Of course, scattering more caltrops increases the likelihood of one or more injuries occuring. This is reflected by the odds of hitting. Damage from a caltrop attack is determined by multiplying the adjSTR for the size of caltrop by the STR for Size value found on the Caltrop Damage table. If the character is sprinting then damage is doubled.

As caltrops are a passive attack there is no skill directly used to strike with them. Certainly there is a certain skill in scattering them effectively, but this has more to do with care and attention rather than a detailed skill. In consequence the attack score is determined by the number of caltrops sown. If there is one caltrop in a hex then it has an attack score of one. If there are twenty caltrops in the hex then they have an attack score of twenty. The size of the caltrops do slightly affect this. Very small caltrops have a penalty to hit of 2 , small caltrops have a penalty of 1 , large caltrops have a bonus of 1 and very large caltrops have a bonus of 2 .

Caltrop attacks are the automatic result of moving into a hex containing them and trigger an immediate check for hitting. If the character is aware of the caltrops he has a better chance of avoiding them. Unaware characters are at simple odds. The base difficulty for an unaware character is 10 adjusted for size. For example, a hex scattered with a dozen small caltrops would have an attack score of 12 and if the hex were entered by an sidhe unaware of them would have a difficulty of 14 .

## Caltrop Damage

| Caltrop Size |  |
| :--- | :---: |
| Caltrop | Damage |
| Very Small | $\times 0.03$ |
| Small | $\times 0.05$ |
| Medium | $\times 0.1$ |
| Large | $\times 0.2$ |
| Very Large | $\times 0.4$ |


| Caltrop Damage |  |  |  |  |  |
| :--- | :---: | :--- | :---: | :--- | :---: |
| Size | $S T R$ | Size | STR | Size | STR |
| Miniscule | 0.6 | Small | 5 | Very Large | 40 |
| Very Tiny | 0.9 | Medium Small | 8 | Huge | 60 |
| Very Tiny | 1.3 | Medium | 12 | Enormous | 90 |
| Tiny | 2 | Medium Large | 18 | Titanic | 135 |
| Very Small | 3 | Large | 27 | Gargantuan | 200 |

On a miss an unaware victim takes half damage, but becomes aware of them. On a failure an unaware victim notices the caltrops, but on fumbles the character is oblivious to the threat posed.

If character is aware that caltrops are in the hex but enters anyway taking care however to avoid stepping on them then the the difficulty is increased by the character's AGI. Any Agility skill having a score higher than AGI can be substituted. If entered by a mounted character then the beast's AGI is used (assuming it is aware), or the rider's Ride skill (if the rider is aware and attempts to steer the mountand overrides the mount's AGI regardless of which is higher). The downside is that the character can take no other action as he is concerned solely with avoiding stepping on the caltrops.

If a character is aware of the caltrops but desires to take some other action while avoiding stepping on them he can do so, but has a penalty to the other action equal to the number of caltrops adjusted by their size. For example, if there are two dozen large caltrops scattered in the hex then he could act, but with a penalty of 25 .

Alternatively, the character can focus on the other action in which case there is no penalty, but he is attacked as if he were unaware. The caltrop attack should be resolved when the hex is first entered and every four strike ranks the character persists on moving while remaining in the hex.To be clear, only actions that require moving one's feet are subject to adjustment and attack by caltrops. An archer can in general stand his ground and shoot without moving, as can a wizard casting spells. Fighting in melee, however, requires footwork and definitely subjects a character to attacks and penalties due to caltrops.

If a character is looking for caltrops then he will most likely find that they are there. The base difficulty is 5 for very large caltrops, 10 for large, 15 for medium, 20 for small and 25 for very small. There is a bonus, however, equal to the number of caltrops in the hex. If a character is using Search then unless he rolls a failure he is presumed to spot at least one of the caltrops. A success in Search is sufficient to find $90 \%$ of the caltrops in a hex with a special increasing that to $95 \%$ and each level of critical success increasing by another $1 \%$. In all
cases round up to find the number of caltrops found.
If there are a significant number of caltrops it is very likely they will be noticed. A character with Notice 3 about to enter a hex with a dozen caltrops has a $50 \%$ chance of registering their presence.

Damage for all caltrops that are stepped on is aggregated into a single damage roll. For this reason they are not considered to do impaling damage even though each individual caltrop is. As an aggregate the damage is considered to be tearing. Thus it doesn't take much armor to stop fairly large amounts of damage. As a special consideration caltrops always atack the feet of a target. At least, if the caltrop attack is the result of normal movement by creatures with legs, a creature that falls on them can take damage to most any location and those that have other means of locomotion, such as snakes, take damage to the appropriate location. Note that any action by a character that relies on his feet is penalized by the amount of damage to them. So a character who takes two, one and three points of damage to his feet from successive caltrop attacks has a penalty of 6 to such actions-assuming that none of the injuries resulted in a serious wound.

Because caltrops are a mindless attack they cannot "choose" the results of a critical success in the same way that a character can. Caltrops will always use the first critical for extra damage and the second for reduced armor protection. Additional criticals result in extra damage rolls.

## Thermal Damage

There are four types of thermal damage to consider: fire and ice and heat and cold. All are cumulative against armor and ignore metal armor entirely, though they can damage it. Fire damage is found as adjSTR of one third the fire intensity while ice damage is found as one third the ice intensity.

While damage from fire and ice is "real" that from heat or cold is considered to be stun in terms of recovery. Every fifth point of heat damage becomes one point of fire damage and every fifth point of cold damage becomes one point of ice damage.

Thermal damage that has accumulated against armor dissipates at the rate of one point per minute. Fire damage becomes heat damage, heat damage
becomes nothing. Ice damage becomes cold damage, cold damage becomes nothing. So it would take ten minutes for three points of fire and four points of head damage to completely dissipate.

Doing heat damage counters accumulated cold damage, doing fire damage counters accumulated ice damage, and vice versa. The thermal stress of countering a point of thermal damage does an additional point of damage to the armor itself. Heat and cold, being stun damage, do not normally damage armor, but this additional point of damage does.

## Fumble Table

Roll Result
01-16 SLIP: Character lurches off balance, penalizing actions and dodges.
17-24 TRIP: Lose balance and next action is spent regaining balance. (Otherwise the character falls down.)
25-28 FALL DOWN: DEX/20 or drop whatever is held.
29, 30 FALL DOwn: Drop held and roll AGI/20 or take damage as from a 10 -foot fall.
31-46 GRIP SLIPS: Fumbled weapon cannot be used until an action is spent regaining grip.
47-54 WIDE OPEN: +6 to be hit for the rest of the round and next attack is -4 SR.
55-58 DROP WEAPON: Weapon falls into the same hex.
59, 60 FLING WEAPON: Weapon is thrown (but not effective for damage) 1d6 hexes in a random direction.
61-76 Strain: -2 penalty with limb $\dagger$ (two strains become a sprain).
77-84 SPRAIN: -6 penalty with limb $\dagger$ and take 1 damage for every CON rounds of continued use (two sprains become a torn muscle).
85-88 TORN MUSCLE: - 12 penalty with limb $\dagger$ and take immediate damage equal to half the character's SWL (not less than one point) and again after every CON rounds of continued use.
89, 90 DISLOCATED JOINT: Unable to use limb $\dagger$ and take immediate damage equal to the character's SWL.
91-94 Fumble BadLY: Reroll twice and apply both results (including additional rerolls).
95-97 Hit SELF $\ddagger$ : Do half normal damage.
98, 99 Hit SELF¥: Do normal damage.
100 Hit SELF:: Do twice normal damage.
$\dagger$ Roll 1d4:
$1=$ Right leg, $2=$ Left leg, $3=$ Right arm, $4=$ Left arm
Leg: Movement halved, Agility skills penalized
Arm: Weapon, Agility and Manipulation skills penalized $\ddagger$ Injured location is chosen by referee

Tim Doty

## UTarited Comibat

This chapter expands on the combat rules to provide detail for the unarmed combatant, primarily in attack and defense. There are four ways that a character can engage in unarmed combat: by using the Brawl, Grapple or Martial Arts skills, or by simple punching and kicking.

A character can simply choose to punch, kick, bite or claw in combat. In such a case simply use the attacks as found on the weapons charts with provisions noted as follows.

## Attack

There are two basic attacks: kick and punch. In either case attacking an armored opponent is risky. If the target is wearing metal armor (or other rigid armor, like the carapace of a turtle) then the character takes Crush damage to the location making the attack equal to his rolled damage, not to exceed the AP of the armor.

For example, Brand takes a swing at the kobold chieftain who is wearing bezainted. Brand rolls 3 points of natural damage; the armor stops all of the damage and Brand takes 3 crush to his right arm. Not deterred, Brand takes another swing and this time does 7 points of natural damage; the armor stops all but 2 points of damage and Brand takes 5 crush to his right arm.

If the character making the attack is armored then it stop damage as normal. If Brand were wearing leather providing 3 AP he would have taken 1 stun from the first punch and 2 crush plus 1 stun from the second.

## Defense

An unarmed character can attempt to "parry" an unarmed attack with his Kick, Punch or Grapple skill. However, parrying a weapon attack only has the effect of allowing the character to choose the location struck-and still requires a skill roll. A special success allows the player to either choose the sublocation struck or to connect with the attacker's limb in such a fashion as to provide the expected parry value. The player must make the declaration of which special effect to use before the parry roll is attempted or damage is rolled.

## Brawling

A character who is brawling gets one and only one attack. He gets no defense, not even a dodge, as he is intent on one goal only: injuring his opponent. This is a completely no-holds-barred form of fighting and it is up to the referee to justify any damage (or lack thereof). Eye gouges, knee twists and insole stomps are all part of it, as is beating the opponent's head against a stone or jamming a spoon down his throat.

Armor has no protective value against brawling because it can be bypassed or even used as part of the method of injury.

## Grappling

Grappling in Rune Master will occur more often outside of a ring than in one. Though wrestling is done for entertainment at county fairs, it is also practiced by martial artists, thieves and warriorsanyone, in fact, who desires to increase their combat effectiveness. The different desires of each in using grappling appear in how they apply it more than how they learn it.

## Grapple Damage

The "damage" done by a grappling attack is found by using an adjSTR on the damage table of STR + Grapple skill level. Thus a STR 4 pixie with Grapple 16 would have a grapple damage of 1 d 12 .

## Animals

In general predatory animals can be assumed to have a Grapple of AGI $\times 2$ and all others a Grapple of AGI $\times 1$. However, this is only for defensive purposes or to escape a hold: not only do they lack skills as such, but many lack gripping handsthough not lacking in ability to break out of a wrestler's hold. An animal capable of making a grappling attack will have the statistics for the attack listed in its description.

## Combat

The Grapple skill can be used offensively or defensively. It can be used for both in the same round, even in the same SR. A character's single attack against a single opponent allowed for a melee engagement can be declared to be a grappling action.

## Attack

Grapple actions function just like normal attacks. They can be enhanced by taking the same attack options as are available to melee attacks under Advanced Options.

Generally a grappling attack cannot be parried, only dodged or defended against with the Grapple skill. Any attempt to parry a grapple attack is rolled for normally, but if the grapple attack itself was successful the defense cannot be better than a miss. In other words, if the grapple attack was a miss the parry might result in a riposte. But even a critically successful parry counts as a miss against a successful grapple attack. Dodge or Grapple defenses work normally.

There are eight different grappling attacks. The maneuver to be used must be chosen before the attack roll is made.

## Break

This move is used to break one of the target's bones and actually consists of a hold plus this maneuver done as a single action. If the resulting grapple "damage" is greater than the target's undamaged HP the limb is broken doing damage for a serious wound. A broken "head" location should be interpreted as a broken neck-which results in death.

## Hold

This is the most basic maneuver used by a grappler. It establishes a hold which effectively prevents the target from using the struck location with a STR equal to the "damage" rolled. It requires one hand to maintain a hold and the hold lasts until the grappler uses his combat action with a different skill, the target successfully breaks the hold or the grappler simply lets go. This maneuver is performed with a bonus of 4 . In future actions the grappler can attempt a break, take away take down, twist or throw maneuver with a bonus of 6 .

A wrestler can also use this maneuver to try and strengthen an existing hold. In such a case the attack has a bonus of 10 (the base bonus of 4 plus the previous hold bonus of 6) and the hold STR of the existing hold is replaced by that of the new attack, even if it is less.

The hold can be broken by brute force if the target spends his combat action attempting to break
the hold and succeeds in a resistance roll of STR/twice hold STR.

## Pin

This move is used to make the target immobile and can only be attempted if the target is fallen and the grappler is on top of him (typically following a take down maneuver). A pin works like a hold except that the target is completely restrained and requires the complete attention of the grappler. It is broken in exactly the same manner as a hold.

## Escape

This move is used to break a hold or pin on the wrestler. The "damage" of this attack reduces the hold or pin STR being applied. In the event of a failure the hold (or pin) STR is increased by adding the roll of the opponent's grapple damage to the hold STR.

## Subdue

This move is used to subdue the target and can only be attempted if the target is already pinned by the grappler. Each time this maneuver is used the wrestler does one point of stun if the rolled damage equals or exceeds the target's SWL. If the rolled damage equals or exceeds twice the target's SWL two subdue points are done, and so on. Once the total of stun and damage done equal or exceed the target's CON he falls unconscious. Stun is recovered from at the rate of CON points every five minutes. For example, a grappler doing 2 d 10 grapple damage has a griffin (CON/END 22) pinned and begins to subdue him. It will take 22 stun to make the griffin fall unconscious-if he gets a normal success and rolls average "damage" every time that is 22 rounds or about 2 minutes. If the griffin is subdued and then released he will make a complete recovery in five minutes.

## Take Away

This move is used to take a grabbable item away from the opponent and actually consists of a hold plus this maneuver done as a single action. If grapple STR overcomes the opponent's grip STR then the item is wrested away. A grabbable item is essentially any item that could be dropped. This includes weapons and bucklers, but not shields that are strapped to the body.

## Take Down

This move is used to make the target fall down and actually consists of a hold plus this maneuver done as a single action. The wrestler matches his grapple damage against the opponent's AGI on the resistance table and checks the following table for the result. In the event of any fall the grappler can choose to follow the target down and be on top of him (so that he can do a Pin, for example).

## Result Success

Critical Flat on back, take 10 ' falling damage, no further actions this round and -5 SR to next round
Special Down on back, -5 SR to next action
Normal On hands and knees, -5 SR to next action
Miss $\quad$ Staggered, -5 SR to next action
Failure Off balance, next action at 6 penalty Fumble No effect

## Throw

This move is used to throw the target and actually consists of a hold plus this maneuver done as a single action. The grappler's base throw distance, in hexes, is read from the chart and adjusted for the target's size. The target takes falling damage of 10 ' per hex thrown unless he succeeds in an AGI, Acrobatics or Jump roll. AGI and Jump both use a resisting score of 20 while Acrobatics only uses a resisting score of 10 . If the throw distance is modified to zero the target will fall anyway. If the distance is negative the effort is a complete failure.

For example, a grappler with STR 17 and Grapple 15 does $2 \mathrm{~d} 8+1 \mathrm{~d} 10$ "damage." If he rolls a special success attempting to throw a troll and rolls 29 damage that indicates 3 hexes minus one hex for a medium large creature, for a net distance of 2 hexes. The troll has no especial Acrobatics skill and so must roll AGI/20 to avoid taking 2d8 damage.

## Twist

This move is used to cause the target pain and actually consists of a hold plus this maneuver done as a single action. The amount of pain caused equals the "damage" rolled for the attack. The pain is transitory, lasting no longer than 5 SR or the end of the round, unless the maneuver is done from an existing hold-in which case it lasts the entire round and,
done consecutively, is continuous. While the pain is in effect the target is penalized on all actions by 1 per point of pain.

For example, Brand is tired of mauling the kobold chieftain with his fists and decides to hold him down and twist his arm behind his back to make him squeal. At first Brand is in a hurry and simply declares a twist maneuver. He applies it successfully in SR 3 and rolls 8 points of damagebut at the beginning of the next round the kobold is no longer feeling the pain.

Brand decides to get a proper hold first and does so. The following round he successfully applies a twist in SR 4 and holds it. Because at the beginning of the next round he declares that he is holding the twist he gets to make a Grapple attack at the first SR anyone acts (but no later than SR 10) and applies the resulting pain for the rest of the round.

## Defense

The Grapple skill can be used to defend against any melee attack. It has a Parry value equal to the wrestler's DEX $\div 3$ against unarmed attacks and a Parry value of zero against any weapon.

|  |  | Throw |  |
| :---: | :---: | :--- | :---: |
| "Damage" | Hexes | Size <br> Tiny | Modifier |
| 1 | -2 | Tiny | +4 |
| 2 | -1 | Very Small | +3 |
| 3,4 | 0 | Small | +2 |
| $5-9$ | 1 | Medium Small | +1 |
| $10-19$ | 2 | Medium | - |
| $20-39$ | 3 | Medium Large | -1 |
| $40-79$ | 4 | Large | -2 |
| $80-159$ | 5 | Very Large | -3 |
| $160-319$ | 6 | Huge | -4 |
| each $\times 2$ | +1 | Enormous | -5 |

Tim Doty

## MAs8 Conibat

The focus of most roleplaying games is on the microcosm, the world of the players. Even if there are big events happening in the game world it is the player characters' roles that are important. To this end the mass combat rules have been devised to streamline resolution of large, or even huge, melees while still preserving the action and involvement of the player characters. More than other parts of Rune Master these rules are guidelines and must be adapted to the situation.

There are two basic approaches to resolving mass combat. In the first the player character's role is summarized into a few dramatically important events which are resolved on a round-for-round basis with generated events being interspersed. In the second approach the player characters' are viewed as being at the eye of the storm with opponents coming and going, but the player characters' actions being resolved on a round-for-round basis.

These two approaches can be intermingled in any given combat and otherwise modified as suits the referee's purpose.

## General Resolution

The overall flow of the combat is resolved by making generic rolls with a frequency determined by the number of combatants. Each roll is resolved by comparing the Mass Combat Score (MCS) of each side on the resistance table. The roll is made on behalf of the aggressor. The opponent's Overall Morale Score (OMS) is reduced by the level of success, conversely the aggressor's OMS is reduced by levels of failure. The battle ends when one side's OMS is reduced below zero.

The frequency with which the rolls are made is determined by the number of combatants in the smaller force. Two armies, numbering 5,000 each, roll every 7 minutes. One of those armies facing a force composed of five giants makes a roll every 2 rounds. One way or the other the battle is going to be over more quickly.

An army's MCS is adjusted as appropriate for situation. For example, entrenched defenders will
get a bonus to their defensive MCS while attackers from a height will gain a bonus to the offensive MCS. An army of cavalry will have reduced MCS in woods.

## Mass Combat Score

An army's MCS is calculated by finding the weighted average of the Threat Score and adjusting for relative size. The smaller army's MCS is simply the calculated weighted average while the larger army's MCS is multiplied by the square root of the ratio of forces. For example, if two 5,000 man armies, each with a weighted average MCS of 10 , face off the final MCS score is 10 . If one of those armies were to be increased to 10,000 men the smaller would still have a final MCS of 10 while the larger would have a final MCS of 14 . On the other hand, if the 5,000 man army faced a group of five

| Round Length |  |
| :---: | :--- |
| Size | Duration |
| 1,2 | 1 round |
| $3-6$ | 2 rounds |
| $7-12$ | 3 rounds |
| $13-20$ | 4 rounds |
| $21-30$ | 5 rounds |
| $31-42$ | 6 rounds |
| $43-56$ | 7 rounds |
| $57-72$ | 8 rounds |
| $73-90$ | 9 rounds |
| $91-250$ | 1 minute |
| $251-650$ | 2 minutes |
| $651-1,250$ | 3 minutes |
| $1,251-2,000$ | 4 minutes |
| $2,001-3,000$ | 5 minutes |
| $3,001-4,200$ | 6 minutes |
| $4,201-5,600$ | 7 minutes |
| $5,601-7,200$ | 8 minutes |
| $7,201-9,000$ | 9 minutes |
| $9,001-16,000$ | 10 minutes |
| $16,001-31,000$ | 15 minutes |
| $31,001-65,000$ | 20 minutes |
| $65,001-146,000$ | 30 minutes |
| $146,001-281,000$ | 45 minutes |
| $281,001-580,000$ | 1 hour |
| $580,001-1,120,000$ | $11 / 2$ hours |
| $1,120,001+$ | 2 hours |

giants (having a weighted average MCS of 100) the army would have a final MCS of 316 .

## Overall Morale Score

An army's OMS is determined by the referee. A rabble would have OMS 0 and be easily dispersed while an elite force would have OMS 5. As a rule of thumb OMS is found as the weighted average of the soldiers' Discipline Skill Level. If the army has a leader then it may be increased as per the normal morale rules. As a special case undead armies generally are not subject to morale and can only be defeated by completely destroying them.
Consequently it takes a much lesser force to be formidable.

## Casualties

The number of casualties is loosely linked to the level of success. As a rule of thumb casualties for each roll are $10 \%$ of the smaller side, plus $2 \%$ per level of success against or minus $1 \%$ per level of success in favor. All casualties are immediately removed from fighting which may alter the MCS, but only about $10 \%$ of the casualties will be fatal (excepting undead where all casualties are fatal). Generally the average weighted MCS is not modified. If that is desired then all units having different Threat Scores must be tracked separately and casualties assigned.

This base level of casualties is adjusted by the referee as makes sense. Another rule of thumb is the casualty rate is multiplied by the average weighted MCS ratio. For example, an army of 5,000 with an average weighted MCS 10 fighting a group of five giants having an average weighted MCS 100 inflicting $10 \%$ casualties would cause $5 \times 10 \% \times 0.1=$ 0.05 casualties. The giants in a similar case would cause $5 \times 10 \% \times 10=5$ casualties.

Fractional casualties are ignored unless the total is less than one. In such a case percentile dice are rolled to determine if a whole casualty resulted. For example, if 0.25 casualties are indicated then a roll $25 \%$ or less results in a single casualty.

## Summary Style

In a summary style of resolution the referee will generally determine a set number of dramatic events before hand and only these are specifically resolved. However, each time a general resolution
roll is made a roll for unspecified player character events should be made. This number is increased by the number of OMS lost by the player character's side, if any. The player can, at his option, roll against Tactics with the level of success reducing the number of unspecified events and the level of failure increasing them.

The number of unspecified events is found by rolling 1d100 against $95 \%$. Each level of success is a potential unspecified event. A 1 s 10 is rolled to determine the severity of the first unspecified event and the total reduced by the roll. Note that the roll cannot exceed the number remaining.

Generically, the severity of the unspecified event is the level of success in an attack against which the character would not normally have a defense. The damage roll should be taken from a typical opponent.

## Eye of Storm Style

In this approach only the opponents being tracked by the player characters are tracked. If an opponent falls then there is a probability that his place will be taken by another opponent. Likewise, there are chances of random hits from untracked opponents. The likelihood of this increases with decreasing morale on the player characters' side.

## InjuRy

Whether in combat or through accident characters have a tendency to become injured. Although in many cases rest and some tender loving care is sufficient to ensure recovery sometimes injuries are so severe that they will never completely heal on their own. And some are simply lethal. Magic can be used to speed the natural healing process and even to heal otherwise incurable wounds

There are five basic types of wounds: superficial, minor, serious, crippling and lethal. If an injury occurs without any damage then it is considered to be superficial. Such an injury may bleed or get infected, but not doing any damage a character cannot die from the wound itself no matter how many superficial wounds are inflicted.

Minor injuries are those that do damage, but do not qualify as being more serious. That is, an injury consisting of at least one point of damage, but doing less than the character's serious wound level. Such wounds usually heal up just fine.

Serious injuries are those that do at least serious wound level damage, but not enough to qualify as being more serious. Such injuries impair the character until healed. Once all the points of damage have healed the impairment itself can be healed.

Crippling injuries are those that do at least HP damage. Although the damage can normally be healed the impairment cannot be completely recovered from. Restoring function takes considerable time and effort.

Lethal injuries are those that do at least triple HP damage to the torso. The damage from such wounds cannot be healed naturally and even if such damage is healed the character will continue to die anyway.

## Natural Healing

It takes $70 \div$ CON days of rest to heal a single point of damage. Injuries are healed in round-robin starting with the lightest. Once all damage in crippling and serious wounds has been healed the character will start to recover from the respective impairments.

To qualify as a restful day the character cannot accumulate a single long term fatigue point. Only consecutive rest days count toward those required to heal a point of damage. So if a CON 10 character is active on the seventh day of rest and accumulates 1 LFP he loses all six of the previously accrued days. If he exerts himself he may aggravate an existing injury, a CON saving throw is necessary to avoid that.

## Serious Wound

A serious wound causes the complete loss of use of the limb while even a single point of damage remains in the injury. Once all points of damage in the injury have been healed the injury moves from stage zero to stage one and limited functionality is regained.

At stage one there is a penalty of six to any action attempted that involves the use of the injured location. To determine other losses, such as to movement rate when a leg is injured, use the percentage found when comparing CON to the penalty. For example, a character in stage one having CON 10 would be reduced to $72 \%$ of normal movement.

At the end of each week the character makes a CON/10 saving throw. On a critical success he improves one stage. Lesser successes have their levels accumulated until an effective critical or better is reached and the next stage is reached. Only after stage three is the injury completely healed.

Stressing the injury before it is completely healed may result in a relapse. The character must make a CON/10 saving throw with each level of miss resulting in the loss of one stage. For example, a character in stage three who fumbled the roll would relapse back to stage zero. If an injury relapses back to stage zero the character takes serious wound level damage in the wound againwhich damage must be healed before recovery of impairment can start again. Each additional "loss of

| Serious Wound |  |  |
| :--- | :---: | :--- |
| Stage | Penalty | Duration |
| Zero | no use | until "healed" |
| One | 6 | 1 week |
| Two | 2 | 2 weeks |
| Three | - | 4 weeks |

stage" below zero causes another serious wound level points of damage.

## Crippling Injury

A crippling injury causes the complete loss of use of the location while even a single point of damage remains in the wound. Once all points of damage in the injury have been healed the character can start regaining partial use of the location. Complete recovery from a crippling injury is not possible without some sort of magic.

When all points of damage in the wound are healed the injury moves to stage one. No use of the location is possible yet, but at the end of each week the character gets a CON/10 saving throw and if he achieves a triple critical then he moves to the next stage. Lesser successes accumulate until a total of at least five levels of success are achieved.

Impairments are handled the same as for serious wounds so in stage two a character with CON 10 having a crippling injury to a leg would be reduced to $50 \%$ of his normal movement rate due to the pronounced limp.

Further, the character is subject to relapse in exactly the same way if he stresses the injury. If the character relapses to stage zero then he takes HP damage to the wound. A relapse to a stage less than zero causes the character to take HP damage to the wound and the crippling becomes permanent with no non-magical possibility for recovery.

Only after the character clears stage four is this risk gone, although the character will still have a penalty of two to any action involving the location.

## Bleeding

Wounds noted as bleeding continue to accumulate damage. For medium sized creatures each level of bleeding causes one point of damage every minute. An attack with a cutting weapon that achieves a

| Crippling |  |  |
| :--- | :---: | :--- |
| Injury |  |  |
| Stage | Penalty | Duration |
| Zero | no use | until "healed" |
| One | no use | 1 week |
| Two | 10 | 1 week |
| Three | 6 | 2 weeks |
| Four | 2 | 4 weeks |

special success causes one level of bleeding. Any blow to the head causes one level of bleeding. Any wound caused by a tearing weapon causes one level of bleeding. Any serious wound causes one level of bleeding. So a serious wound to the head inflicted by a tearing weapon does three levels of bleeding, or causes the accumulation of 3 points of damage every minute.

When a wound is being healed any damage due to blood loss is healed first.

## Cumulative Damage

Sometimes it happens that a character comes to an untimely end. But except in extreme cases it takes time to die and, with sufficiently powerful magic, the process can be reversed at any step along the way.

The total damage taken by a character-whether it is normal damage, stun damage or bleeding damage - may have an adverse effect on the character even if each wound taken individually does not.

## Normal Condition

If a character's HP exceed the total damage he is considered to be in normal condition and can act normally, excepting of course for specific impairments (such as the effects of any serious wounds he may have).

## Shock

If the total damage to a character equals or exceeds his HP then the character is in shock. A character who is in shock cannot move, attack, speak, cast spells, use psychic power, or indeed do much of anything. A character who is in shock is unable to stand, walk, or even sit upright while unassisted. Nor can the character talk, think coherently or achieve any action. He is only loosely aware of his surroundings, any perception is hazy at best.

## Critical Condition

If the total damage to a character equals or exceeds twice his HP then the character is considered to be dying. Unless extreme circumstances dictate otherwise (such as magic) the character will be completely unconscious and unable to heal naturally. The only way to improve the character's condition is through medical treatment (using the Medical skill) or magic.

## Mostly Dead

If the total damage equals or exceeds triple the character's HP then he is mostly dead. A character who is mostly dead cannot heal-natural healing does not occur, magic or potions which are applied reduce damage but do not change the character's state. After POW hours in this state the character will lose POW at the rate of one point per hour. This loss is permanent.

The only way to improve the character's condition is through magic which specifically does so. Nothing else works.

## All Dead

If a mostly dead character's POW reaches zero he dies permanently. This can only be altered by resurrecting the character.

## Instant Death

If the total damage to a character equals or exceeds ten times his HP then the character dies instantly. In fact the death is so fast that the spirit is unable to transition to the spirit world and is stuck in the plane in which it died as a ghost.

## Treatment

There are two skills useful in treating injuries: First Aid and Medical. These skills are distinct-it is advisable for a character with Medical skill to also know First Aid.

## Tourniquets

The only way of dealing with a real gusher is a tourniquet. The danger with one is that the binding will be too tight, cutting off too much circulation and killing the living tissue-forcing an amputation to avoid gangrene. It takes at least four rounds to apply, but the effect is rolled for and considered to apply after the first round.

A tourniquet will stop most bleeding. A wound bleeding I point or more per round will continue bleeding that many points every hour. If intentionally applying a tourniquet the character rolls at his normal First Aid skill. Any success gets the benefit of a tourniquet. A miss means that the bleeding is slowed to half normal. A failure means that it was completely ineffective and a fumble that it is too tight causing damage from constriction as outlined previously.

## First Aid

There are a variety of treatments available with this skill, all of the basic variety.

## Stopping Bleeding

To do so without rags for binding the wound requires that the character stay with the injured and apply constant pressure. Normally a person can only treat one wound at a time in such a fashion. The effect of a skill roll only lasts for one minute, and then only if the character continues to apply pressure.

The level of success temporarily reduces the levels of bleeding. A miss is sufficient to stop a $1 / 2$ level or less of bleeding. A failure indicates that the flow of blood is not slowed. A fumble indicates that too much pressure is being applied-if this is maintained for too long the excessive loss of circulation can be damaging.

Fractional blood point losses should be accumulated until a full blood point loss is reached. Fractional blood points only count for accumulating into a full blood point. They have no other effect.

If bandages are available and immediately to hand they take one round to apply. This assumes that the bandages are immediately at hand, that the injured character is already positioned to have the wound bandaged, and the character doing the bandaging is already in place and doing nothing else. It will generally take at least three to five rounds to get everything ready and apply a bandage. If the wound to be bound is bleeding rapidly it is a good idea to have someone keeping direct pressure on it to slow or stop the flow of blood. A bandage works just like applying direct pressure except that it only needs to be rolled for once each time a bandage is applied. A bandage should be changed every four to eight hours, more often if the blood flow is not stopped. If the wounded character moves the bandage may shift so that it is rendered ineffective. If the bandage is applied with a fumble it will cut off too much circulation and the injured character will take one point of damage to the location every hour. This is cumulative damage: when it reaches serious wound level there will be permanent damage to the limb after healing. If the damage reaches twice serious wound level too much of the tissue has died and the limb will have to be
amputated-which is bad news if it is a head wound.

A character who fumbles a wound binding will not be aware, like the player is, of the fumble. The players should stay in character and not all of a sudden feel a need to double check bindings.

## Splinting

It normally takes at least a minute to assemble a field splint from miscellaneous items, such as sword scabbards, unused axes, broken tree limbs, and the like, probably even more time. It takes about five rounds to apply a splint after everything is in readiness. Although the level of success determines how well the splint was applied, the splint itself determines how effective it is. An effective, well-applied splint will allow minimal use of the limb. For example, to walk on a splinted leg. As a rule of thumb the action penalty is 20 with a normal success, halved for each additional level of success.

## Assessment

This skill can also be used to get a basic assessment of an injured creature's condition. The better the level of success the more accurate the assessment. A normal success will identify things like the onset (or danger of) shock and heat exhaustion. It will also identify wounds that are bound too tightly.

## Medical

A character with Medical skill can provide effective bed-side care and improve a character's condition. Medical skill is also necessary for diagnosis and thus prescription. This is also the skill used to perform surgery.

## Bed-Side Care

If constant care is given to the patient then Medical skill score is added to the patient's CON when determining the healing rate or making rolls to recover from a serious or crippling injury. For example, if the care-taker has Medical 15 and the patient has CON 10 then instead of healing one point of damage every seventh day he will heal one point every three days.

To give effective bed-side care requires not just time, but equipment and materials. Which equipment and what materials depends on the sort of treatment being given. For example, an injured
character will likely require clean bandages and thus the care-giver will need a supply of bandages and means to sanitize them. Any use of special remedies, such as herbals, is in addition to the bedside care.

If a care-giver is dividing time between patients then doing so divides the skill score in proportion to the time allotted each one. So if a care-giver with Medical 15 is dividing time equally between three patients each one will have CON improved by five points for purposes of healing.

## Diagnose

To make a diagnosis requires a skill roll with the difficulty being assigned based on several factors. The more information the better, though if the information is confusing or conflicting that should be taken into account. Also, due consideration must be given to the real affliction and its subtlety.

For example, if the affliction is a common illness with easily recognized symptoms then a correct diagnosis is easy to obtain. On the other hand if the affliction is rare and mimics the symptoms of a common illness then getting a proper diagnosis is much more difficult. The level of success represents the character's confidence in the diagnosis. A failure indicates that a mistaken diagnosis is given and a fumble that the diagnosis has no bearing on reality. A fumble may result in a prescription that is dangerous to someone not actually suffering from the indicated affliction.

## Urgent Care

If a character is in critical condition then special care is required to stabilize, and hopefully improve, his health. Attempting to provide urgent care without proper equipment results in substantial penalties. Without any equipment at all there is a penalty of 20 .

A skill roll is required when care begins and every five minutes thereafter. On a miss the condition is not improved, but neither does it worsen. Five levels of success must be accumulated to bring the character out of critical condition. Each failure reduces the accumulated level of success by one and any fumble causes damage equal to HP for each level of the fumble. Without magic any fumble
causes the character to enter the "mostly dead" state at which point non-magical aid is useless.

## Other Injuries

A character can be injured in more ways than simple damage. Specifics on how to deal with strains, sprains, dislocated joints, infection and gangrene are given here.

## Strains and Sprains

A character recovers from strains and sprains through rest and treatment. A character who is not aggravating the injury rolls CON/10. The resisting score increases with the amount of abuse the injury receives, perhaps to 15 or 20 . The roll is interpreted as follows.

| Success | Strain | Sprain |
| :--- | :---: | :---: |
| Critical $^{3}$ | 15 minutes | 1 day |
| Critical $^{2}$ | 30 minutes | 2 days |
| Critical $^{2}$ | 45 minutes | 3 days |
| Special | $11 / 2$ hours | 4 days |
| Normal | 3 hours | 1 week |
| Miss | 8 hours | $11 / 2$ weeks |
| Failure | 1 day | 2 weeks |
| Fumble | $11 / 2$ days | 3 weeks |
| Fumble | 2 days | 5 weeks |
| Fumble $^{3}$ | 3 days | 8 weeks |

## Torn Muscle

Once the overt damage (damage points) have been healed the muscle begins to repair. At that point the penalty is only 10 for use, but each instance (a single instance is 1 SR of activity) requires a CON/20 roll to avoid re-tearing the muscle. After a week the penalty drops to 6 and the chance to tear the muscle is CON/10. After two weeks the penalty drops to 2 and the chance to tear the muscle is CON/10 with each instance covering a round of activity. After four weeks there is no penalty and the chance to tear the muscle is CON/5 with each instance covering a round of activity. After eight weeks the muscle is completely healed.

At the beginning of each recovery stage the character is allowed one CON/10 roll to determine his body's recovery rate. Normal successes and misses have no effect. Each additional level of success increases or decreases the base recovery time by a number of days equal to the number of
weeks the stage normally takes. For example, if a character in stage three rolls a double critical then it will only take him four days to reach stage four. (The absolute minimum time to completely recover from a torn muscle is 16 days. The maximum time, barring re-tearing the muscle, is 96 days.)

## Dislocated Joint

A joint that has been dislocated must be set and, much like a torn muscle, given time to heal. Once the joint has been relocated use is again possible, but it will have a penalty. To relocate a joint requires a First Aid skill roll and two rounds (one to prepare, one to relocate). This is a painful procedure and cannot normally be performed on oneself.

The time to recover from a dislocated joint, once it is set, is the same as for recovering from a torn muscle.

## Infection

If the CON roll is a Fumble then the wound becomes infected. If the wound is already infected then a Failure results in the infection worsening. If a wound becomes "infected" twice (two fumbles or a fumble and two failures) then it is considered to be gangrenous. While a wound is infected it won't heal. It takes two success points to end a normal infection or to reduce a "worsened" infection to a normal infection.

## Gangrene

If a wound becomes gangrenous then the only resort is strong magic or amputation. Only magic which specifically stops gangrene is of any use. A character suffering from gangrene must make a CON/7 roll every day to avoid the gangrene spreading. When gangrene spreads it first generally afflicts the location of the wound and then the chest. Once either the head or chest locations are gangrenous the character dies. (Technically the character becomes

| Torn Muscles |  |  |  |  |
| :--- | :---: | :---: | :---: | :--- |
| Stage | Penalty | Activity | Tear | Duration |
| One | 14 | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | until "healed" |
| Two | 10 | 1 SR | CON $/ 20$ | +1 week |
| Three | 6 | 1 SR | CON $/ 10$ | +1 week |
| Four | 2 | 1 Rnd | CON $/ 10$ | +2 weeks |
| Five | - | 1 Rnd | CON $/ 5$ | +4 weeks |

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mostly dead, see the entry on Death for more details.) Further, the gangrene will continue to spread and all affected locations must be treated before the character can recover.

## DisEASE

The plague comes in many forms and has many effects. Generally, a diseased character will run a fever as a side effect of the body trying to fight off the infection. Typical symptoms are weakness, dizziness, nausea, light headed, shaking, vomiting, diahrea, coughing and sneezing.

The stages of a disease are exposure, infection, resistance and recovery. For each exposure a CON/Virulence roll must be made to avoid infection. A disease will have an incubation time which is the length of time it lies dormant after the initial infection. Once the disease is active the character will suffer appropriate symptoms as the body tries to fight it off. Finally, once the disease has been beaten the body is usually in a weakened state and must recover.

All diseases are contagious. Usually, but not necessarily nor exclusively, they are contagious while dormant. Consult the disease description to ascertain when an infected character is a carrier.

Also, some specie may be infectable, but are never affected by the disease acting only as carriers. This again is noted in the description.

For game purposes a disease has five levels of severity. The result of the initial infection roll determines the initial severity following the incubation period. Each time the character makes a resistance roll to fight off the disease the severity may be adjusted. A miss results in severity 0 - the disease is present, but has no real symptoms. It must still be fought off. A failure results in severity 1 -this is the most mild form of symptom. A fumble results in severity 2 , a double fumble in severity 3 , a triple fumble in severity 4 and a quadruple fumble in severity 5 .

On subsequent resistance rolls a success of at least the same equivalency reduces the severity by one while a roll worse than the current severity increases such by one.

For example, if disease has severity 0 (miss) then any success fights off the illness. If the disease has severity 1 (failure) then a special success is required to lessen the disease. If the disease has severity 2 (fumble) then a critical is required to
lessen the disease, and so on. So even though the initial infection can have any severity subsequent adjustments are in increments of one level only.

If an attribute is decreased by disease it cannot be reduced below 0 . At STR 0 the character is barely able to open his eyes and swallow, much less move about. At CON 0 the character dies. At END 0 the character may have theoretical STR, but barely has enough energy to continue breathing. At DEX 0 the character has no coordination and any attempt at movement results in futile flailing. At AGI 0 the character has no ability to stand or even sit up-his sense of balance is completely gone and motion is incomprehensible. At WIT 0 the character does not see, hear, feel or in any meaningful way perceive what is around him. At WIL 0 the character has no will or desire left, no id nor ego. As a consequence he will simply lie there in complete despondancy. At POW 0 the character is in a vegetative coma. At TAL 0 the character is unable to reason or make connections. At CHA 0 the character is withdrawn from the world and unable to interact.

## Brain Rot

Virulence: $3 d 8$
Incubation: 1-6 days

## Infection

Condition: $L O E \geq 0$ (miss)
Effect: incubation for 1d6 days
Incubation +0 days
Condition: $L O E \geq 1$ (success)
Effect: lose LOE points of WIT, WIL and POW
Recovery: one point per week after disease has run its course

Incubation + 1 day
Condition: $L O E \geq 1$ (success) Effect: lose LOE points of WIT, WIL and POW
Recovery: one point per week after points lost above have been fully recovered
Incubation +2 days
Condition: $L O E \geq 2$ (special)
Effect: lose LOE points of WIT, WIL and POW
Recovery: one point per week after points lost above have been fully recovered

Incubation + 4 days
Condition: $L O E \geq 2$ (special)
Effect: lose LOE points of WIT, WIL and POW
Recovery: one point per week after points lost above have been fully recovered

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```
Incubation +1 week
Condition: \(L O E \geq 3\) (critical)
```

Effect: lose LOE points of WIT, WIL and POW
Recovery: one point per week after points lost abo ve have been fully recovered
Incubation + 2 weeks
Condition: $L O E \geq 3$ (critical)
Effect: lose LOE points of WIT, WIL and POW
Recovery: one point per week after points lost above have been fully recovered

```
Incubation + 3 week
Condition: \(L O E \geq 4\) (critical \({ }^{2}\) )
```

Effect: lose LOE points of WIT, WIL and POW
Recovery: one point per week after points lost above have been fully recovered.

## Incubation + 4 weeks

Condition: $L O E \geq 4$ (critical ${ }^{2}$ )
Effect: lose LOE points of WIT, WIL and POW
Recovery: one point per week after points lost above have been fully recovered
This disease causes deterioration of the brain and mental functions. If POW is reduced to zero the character dies immediately. Neither WIT nor WIL can be reduced below zero, but if WIT is reduced to zero the character becomes a vegetable and cannot recover the lost points.

## Cold

Virulence: 15
Incubation: 1-3 days

## Cough

Condition: $L O E \geq 1$ (success)
Effect: coughing and sneezing affect physical actions with a penalty of $L O E^{2} \times 1 \%$.
Time: ?
Recovery: ?
The common cold...

## Flesh Rot

Virulence: 15
Incubation: 1-6 hours
Contagious: throughout its life, for 1-6 hours on corpse
Transmission: contact

## Infection

Condition: $L O E \geq-1$ (failure)
Effect: incubation for $1 d 6$ hours

## Incubation + 0 hours

Condition: $L O E \geq 0$ (miss)
Effect: itching, low grade fever
Recovery: goes away with disease

[^0]Effect: scabs form, high grade fever
Recovery: goes away with disease

## Incubation + $\mathbf{1 2}$ hours

Condition: $L O E \geq 1$ (success)
Effect: flesh starts to become necrotic, take LOE damage every 12 hours until dead. Damage is cumulative to a single wound generalized over the entire body.
Recovery: magical healing only
This disease is typically carried by ghouls (who are immune to it) and zombies. Any physical contact with a zombie invites infection. The saliva of a ghoul carries the disease, any bite from a ghoul has the potential to transmit the disease.

## Magic

Virulence: SL
Incubation: 1-4 rounds
Contagious: never
Transmission: none

## Infection

Condition: $L O E \geq 0$ (miss)
Effect: incubation for LOE rounds

## Incubation +0 rounds

Condition: $L O E \geq 0$ (miss)
Effect: distraction from itching sores causing penalty of LOE to all actions
Recovery: distraction reduced by one point per week after disease has run its course or is cured

Incubation +1 minute
Condition: $L O E \geq 1$ (failure)
Effect: reduce STR, CON and END by LOE
Recovery: one point per day of rest if disease is cured
Incubation +1 hour
Condition: LOE $\geq 1$ (failure)
Effect: reduce STR, CON and END by LOE
Recovery: one point per week of rest after previous loss is recovered

Incubation +1 day
Condition: $L O E \geq 1$ (failure)
Effect: reduce STR, CON and END by LOE
Recovery: one point per month of rest after previous loss is recovered

Incubation +1 week
Condition: $L O E \geq 1$ (failure)
Effect: reduce STR, CON and END by LOE
Recovery: one point per year of rest after previous loss is recovered

Incubation + 1 month
Condition: $L O E \geq 1$ (failure)
Effect: reduce STR, CON and END by LOE
Recovery: one point every ten years of rest after previous loss is recovered

Incubation + 1 year
Condition: LOE $\geq 1$ (failure)
Effect: reduce STR, CON and END by LOE
Recovery: one point per century of rest after previous loss is recovered
This disease is an abstraction resulting from magic. The listed attributes are the default state though a given instance of magical disease may have different attributes, e.g., be able to transmit the disease. Note that no attribute can be reduced below zero, but if CON is reduced to zero the character dies. If a character is infected with this disease multiple times the attribute losses are tracked separately and are cumulative. For recovery all at the previous level must be recovered.

## Plague

Virulence: 25
Incubation: 7-10 days
Contagious: throughout its life
Transmission: contact

## Infection

Condition: $L O E \geq 0$ (miss)
Effect: incubation for $1 d 4+6$ days

## Incubation + 0 hours

Condition: $L O E \geq 0$ (miss)
Effect: coughing affects physical actions with a penalty of $\mathrm{LOE}^{2} \times 1 \%$. Low grade fever.
Recovery: goes away when the disease has run its course

## Incubation + 16 hours

Condition: $L O E \geq 1$ (success)
Effect: reduce STR, CON and END by LOE, high grade fever penalizes all actions by LOE. Cough continues.
Recovery: one point per week of rest once the disease has run its course, fever goes away when the disease has run its course

Incubation +1 week
Condition: LOE $\geq 2$ (special)
Effect: reduce STR, CON and END by 1, and again each week thereafter until death. High grade fever and cough continue
Recovery: one point per week of rest if disease is cured
This is a much feared disease that occasionally occurs in epidemic proportions. Fear of the plague and its spread results in villages, and sometimes entire towns, being burned to the ground with all inhabitants, both man and beast.

It is contagious from the moment of infection until, and if, the character defeats the infection. Those who died from the plague, or while infected with it, are contagious for 7 to 10 days afterwards.

Contagion is spread by contact of any sort. Just being in a plague-ridden village has plague miasma in the air. Physical contact with the diseased or, even worse, contact with anything internal from them (cough, sneeze, phlegm, blood, etc.) will also do it. Each such contact requires an infection roll. At the end of simple exposure to plague miasma roll for infection with a virulence of 5 .

## Leprosy

Virulence: 20
Incubation: 6 months to 40 years, typically 2-3 years
Contagious: after incubation
Transmission: touch

## Infection

Condition: LOE $\geq 1$ (success) Effect: incubation for 1 d12 $\times 6$ months

## Incubation +0 months

Condition: LOE $\geq 1$ (success)
Effect: roll LOE times for locations to have sores Recovery: none
+1d12 months
Condition: reroll effect, $L O E \geq 1$ (success)
Effect: roll LOE times for locations to have sores Recovery: none

## When gain new sore in location

Condition: three instances of sores to a single location Effect: No feeling in that location Recovery: none

When gain new sore in location Condition: CON/number of instances of sores to a location; Failure Effect: location becomes gangrenous Recovery: none
Leprosy is characterized by loss of sensation and sores in affected areas with eventual progression to gangrene. It is generally considered to be transmitted by touch, but the more likely vector is respiratory droplets (inhalation of a carrier's exhaled breath, cough or sneeze).

There is no cure for leprosy excepting magic. Death comes from gangrene. Note that LOE 1 is required for symptoms, LOE 0 is still incurable and the character becomes a carrier.

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## Doifg Stuff

This chapter provides rules for character actions, or "doing stuff." With the exceptions of fighting and casting spells, pretty much everything that a character will do is covered here.

## Lifting

Under normal circumstances a character is assumed to be able to lift a number of pounds equal to his STR, squared. Doing so costs a number of FP equal to the Held Enc for weight of the object. A character can attempt to exert greater strength, up to three points greater than his actual strength, but doing so costs additional fatigue and carries a certain amount of risk.

The amount of fatigue incurred by the lifting attempt is increased by the number of points of the character's STR score is being increased. To determine if the lift was successful the character's CON is matched against a resisting score of 10 and the result checked on the Lifting table.

For example, for a character with STR 15 to lift a sword (3 pounds) costs no FP as it weighs $71 / 2$ pounds or less ( 0 Held Enc), but to lift a fifty pound crate costs 3 FP . The character could not normally lift a 300 pound gate, but by pushing his strength 3 points he could make the attempt. Each attempt would cost him 9 FP ( 6 Held Enc, plus 3 pushed STR) and require a roll on the resistance table matching the character's CON against a 10 . Only with a critical success will the gate be lifted.

The Lift table is interpreted as follows:
Lift: The character is able to completely lift the amount indicated, but pays additional fatigue at the end of each round equal to the amount by which STR is pushed.
Slide: The character is able to lift momentarily, but incompletely, or to slide the object in question. Objects can only be slid on smooth, level surfaces or those sloping downward.

Budge: The character is able to budge the

| Lifting |  |  |  |
| :--- | :--- | :--- | :--- |
| CON/10 | STR +1 | STR +2 | STR +3 |
| Critical | Lift | Lift | Lift |
| Special | Lift | Lift | Slide |
| Normal | Lift | Slide | Budge |
| Miss | Slide | Budge | Strain |
| Failure | Budge | Strain | Pull |
| Fumble | Strain | Pull | Tear |

object, but no more.
Strain: The character strains a muscle. Additional attempts within 24 hours incur a cumulative penalty of +2 to the resistance score.
Pull: The character pulls a muscle, effectively one point of damage. Additional attempts before the pulled muscle is healed incur a cumulative penalty of +5 to the resistance score.

| Max Lift |  |  |  |  |  |  |  |  |
| :---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STR | Lbs. | STR | Lbs. | STR | Lbs. | STR | Lbs. |  |
| 1 | 1 | 26 | 676 | 51 | 2601 | 76 | 5776 |  |
| 2 | 4 | 27 | 729 | 52 | 2704 | 77 | 5929 |  |
| 3 | 9 | 28 | 784 | 53 | 2809 | 78 | 6084 |  |
| 4 | 16 | 29 | 841 | 54 | 2916 | 79 | 6241 |  |
| 5 | 25 | 30 | 900 | 55 | 3025 | 80 | 6400 |  |
| 6 | 36 | 31 | 961 | 56 | 3136 | 81 | 6561 |  |
| 7 | 49 | 32 | 1024 | 57 | 3249 | 82 | 6724 |  |
| 8 | 64 | 33 | 1089 | 58 | 3364 | 83 | 6889 |  |
| 9 | 81 | 34 | 1156 | 59 | 3481 | 84 | 7056 |  |
| 10 | 100 | 35 | 1225 | 60 | 3600 | 85 | 7225 |  |
| 11 | 121 | 36 | 1296 | 61 | 3721 | 86 | 7396 |  |
| 12 | 144 | 37 | 1369 | 62 | 3844 | 87 | 7569 |  |
| 13 | 169 | 38 | 1444 | 63 | 3969 | 88 | 7744 |  |
| 14 | 196 | 39 | 1521 | 64 | 4096 | 89 | 7921 |  |
| 15 | 225 | 40 | 1600 | 65 | 4225 | 90 | 8100 |  |
| 16 | 256 | 41 | 1681 | 66 | 4356 | 91 | 8281 |  |
| 17 | 289 | 42 | 1764 | 67 | 4489 | 92 | 8464 |  |
| 18 | 324 | 43 | 1849 | 68 | 4624 | 93 | 8649 |  |
| 19 | 361 | 44 | 1936 | 69 | 4761 | 94 | 8836 |  |
| 20 | 400 | 45 | 2025 | 70 | 4900 | 95 | 9025 |  |
| 21 | 441 | 46 | 2116 | 71 | 5041 | 96 | 9216 |  |
| 22 | 484 | 47 | 2209 | 72 | 5184 | 97 | 9409 |  |
| 23 | 529 | 48 | 2304 | 73 | 5329 | 98 | 9604 |  |
| 24 | 576 | 49 | 2401 | 74 | 5476 | 99 | 9801 |  |
| 25 | 625 | 50 | 2500 | 75 | 5625 | 100 | 10000 |  |

Tear: The character tears a muscle, taking a number of points of damage equal to his Serious Wound Level.

## Throwing Things

There are times when a character wants to throw things not designed for use as a thrown weapon. Usually such an object is not particularly well balanced so accuracy isn't very good. In general, use DEX $\times 1^{1} / 2^{\prime}$ for short range and DEX $\times 3$ ' for medium range, adjusted for the size of the thrower. If STR is less than DEX, use it instead of DEX for determining these ranges. In order to hit with such an object the Throw Rock skill is used, though the referee may choose to penalize

| Throwing Accuracy |  |
| :--- | :---: |
| Size | Modifier |
| Extremely Tiny | $\times 1 / 10$ |
| Very Tiny | $\times 1 / 6$ |
| Tiny | $\times 1 / 4$ |
| Very Small | $\times 1 / 3$ |
| Small | $\times 1 / 2$ |
| Medium Small | $\times 2 / 3$ |
| Medium | $\times 1$ |
| Medium Large | $\times 11 / 2$ |
| Large | $\times 2$ |
| Very Large | $\times 3$ |
| Huge | $\times 41 / 2$ |
| Enormous | $\times 6$ |
| Titanic | $\times 9$ |
| Gargantuan | $\times 13$ |


| Throwing Distance |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Weight | Mod | Weight | Mod | Weight | Mod |
| 1 | 0 | $44-47$ | 20 | $151-158$ | 40 |
| 2 | 1 | $48-51$ | 21 | $159-165$ | 41 |
| 3 | 2 | $52-55$ | 22 | $166-172$ | 42 |
| 4 | 3 | $56-59$ | 23 | $173-180$ | 43 |
| 5 | 4 | $60-63$ | 24 | $181-188$ | 44 |
| 6 | 5 | $64-68$ | 25 | $189-195$ | 45 |
| 7,8 | 6 | $69-73$ | 26 | $196-204$ | 46 |
| 9 | 7 | $74-78$ | 27 | $205-212$ | 47 |
| 10,11 | 8 | $79-83$ | 28 | $213-220$ | 48 |
| 12,13 | 9 | $84-88$ | 29 | $221-229$ | 49 |
| 14,15 | 10 | $89-94$ | 30 | $230-238$ | 50 |
| $16-18$ | 11 | $95-99$ | 31 | $239-246$ | 51 |
| 19,20 | 12 | $100-105$ | 32 | $247-255$ | 52 |
| $21-23$ | 13 | $106-111$ | 33 | $256-265$ | 53 |
| $24-26$ | 14 | $112-117$ | 34 | $266-274$ | 54 |
| $27-29$ | 15 | $118-124$ | 35 | $275-284$ | 55 |
| $30-32$ | 16 | $125-130$ | 36 | $285-293$ | 56 |
| $33-35$ | 17 | $131-137$ | 37 | $294-303$ | 57 |
| $36-39$ | 18 | $138-143$ | 38 | $304-313$ | 58 |
| $40-43$ | 19 | $144-150$ | 39 | $314-323$ | 59 | it for particularly unwieldy objects.

The maximum distance which a character can throw an object is somewhat variable due to the numerous factors of shape, grip, balance, and so on. For game purposes the maximum distance which a character can throw a generic object is equal to STR $\times 10$ feet, or two hexes per point of STR. This assumes a light object, however, weighing a mere pound. To find the actual distance for heavier objects look up the modifier (in hexes) on the Throwing Distance table. For example, a character with STR 12 has a base throwing distance of 24 ( 120 feet), but could only throw a 30 pound object $(24-16) 8$ hexes, or 40 feet. If an object is imbalanced or unwieldy then the range should be reduced as well as imposing a to hit penalty for throwing accuracy.

A character can try to exert himself to throw farther. This works by an effective increase to the character's STR just as with lifting and so increases distances by up to 6

| Throwing Damage |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Weight | Damage | Weight | Damage | Weight | Damage |
| 1 | 0.3 | $81-88$ | 2.3 | $289-302$ | 4.3 |
| 2,3 | 0.4 | $89-96$ | 2.4 | $303-316$ | 4.4 |
| 4 | 0.5 | $97-104$ | 2.5 | $317-331$ | 4.5 |
| 5,6 | 0.6 | $105-112$ | 2.6 | $332-345$ | 4.6 |
| 7,8 | 0.7 | $113-120$ | 2.7 | $346-360$ | 4.7 |
| $9-11$ | 0.8 | $121-129$ | 2.8 | $361-376$ | 4.8 |
| $12-14$ | 0.9 | $130-139$ | 2.9 | $377-392$ | 4.9 |
| $15-17$ | 1.0 | $140-148$ | 3.0 | $393-408$ | 5.0 |
| $18-21$ | 1.1 | $149-158$ | 3.1 | $409-424$ | 5.1 |
| $22-24$ | 1.2 | $159-168$ | 3.2 | $425-440$ | 5.2 |
| $25-29$ | 1.3 | $169-179$ | 3.3 | $441-457$ | 5.3 |
| $30-33$ | 1.4 | $180-190$ | 3.4 | $458-475$ | 5.4 |
| $34-38$ | 1.5 | $191-201$ | 3.5 | $476-492$ | 5.5 |
| $39-43$ | 1.6 | $202-213$ | 3.6 | $493-510$ | 5.6 |
| $44-48$ | 1.7 | $214-224$ | 3.7 | $511-528$ | 5.7 |
| $49-54$ | 1.8 | $225-237$ | 3.8 | $529-547$ | 5.8 |
| $55-60$ | 1.9 | $238-249$ | 3.9 | $548-566$ | 5.9 |
| $61-67$ | 2.0 | $250-262$ | 4.0 | $567-585$ | 6.0 |
| $68-73$ | 2.1 | $263-275$ | 4.1 | $586-605$ | 6.1 |
| $74-80$ | 2.2 | $276-288$ | 4.2 | $606-624$ | 6.2 |

## Throwing Example

Günnar is a big, strong man (STR 21) who normally keeps to himself, but while minding his own business in a bar a drunk bumps into him. Günnar decides to take exception to this and picks the drunk up to hurl him across the room. The drunk weihs 150 pounds giving a distance modifier of 39-reducing Günnar's throwing distance to 3 hexes, or about 15 feet. This is enough to send the drunk sailing into the wall ten feet away taking damage as if from a 15-foot fall, or $2 d 6$ crushing damage.

When the drunk gets up to come back for more, Günnar picks up an empty chair (five pounds) and throws it at the charging drunk. Günnar's range with the chair is 38 hexes, times a damage factor of 0.6 gives an adjSTR of 22.8, or $1 d 8+1 d 10$ damage.
hexes, or 30 feet. To be successful requires a result of "Lift" on the Lift table.

The damage done by a thrown object is as variable as the range, although for additional factors of rigidity, sharpness, and so on. For hard objects, such as those made of rock or metal, the base adjSTR is equal to the maximum distance (in hexes) which an object of that weight can be thrown. The damage multiplier is based on the weight of the object and looked up on the Throwing Damage table. For softer or less rigid objects the adjSTR should be reduced.

If a living creature is thrown the simplest solution for damage is to consider the distance of the throw to be a fall of equivalent height.

If the maximum height reached by a throw is significant, e.g., when throwing indoors, it can be assumed to be one-tenth of the horizontal distance, plus the height of the thrower. If an object is thrown for height each foot of height gained reduces the horizontal range by two feet. So a man standing six feet in height trying to throw a rock over a twentyfoot wall will have his horizontal distance reduced by 24 feet, or about five hexes. The actual mechanics of projectile motion are, of course, far more complex than this-but the point is a simple and usable system, not a physics lesson.

## Breaking Things

During the course of the game, characters are likely to try and break chairs, knockdown doors and generally attack objects. An object, like a character, has both Armor Points and Hit Points. Most things in the game are made solely or primarily from a single material and the AP and HP values are taken from the material. Handling compound material objects is up to the referee, but some "compound" objects can be considered separately. For example, a carriage might have an iron undercarriage, but wooden wheels and cab. The doors will be of a considerably lighter wood than the wheels.

To earn the AP due a material an object must have a minimum thickness. Objects thinner than this minimum have the AP prorated accordingly. For example, wood has 2 AP , but must be at least $1 / 2$ " thick to get this. A wood panel $1 / 4$ " thick would get half the AP. The depth of penetration of an attack depends on the amount and type of damage done as well as the object's material. The result of this penetration depends on the material. Wood will flex, separate and lose strength. Stone or brick will chip, powder and disintegrate. Metal will twist, stress and weaken.

Wood or hardwood has half the rated HP for blows with the grain and double the rated HP for cross-grain blows from edged weapons.

In general, any reduction to the effectiveness of AP is also applied to the HP of an object. Thus an impaling weapon ( 2 AP stop 1 point of damage) does double damage to an object for purposes of determining if it penetrated. This includes those weapons with specific AP adjustment, such as a halberd used with a backswing. An impaling weapon that achieves a special success penetrates 4 AP or HP per point of damage.

However, for purposes of reducing the overall HP of an object the reverse is true. Thus the damage done by an impaling weapon is halved. An attack that took 4 AP to stop one point of damage would only do $1 / 4$ damage, and so on.

For example, a berserker with a mace smashes a 1" oak door ( $30 \mathrm{PP}, 2 \mathrm{AP}, 120 \mathrm{HP}, 360$ totHP) for 12 points of damage. As the damage does not exceed the door's PP the blow does not penetrate, though it does give. The twelve points of damage, reduced for
the 2 AP , does 10 points of damage to the door reducing it to 110 HP and 350 totHP. The crossbowman on the other side, hearing the hit and seeing the door bowing, fires his crossbow at the door doing 7 damage. It is an Impale $\times 2$ attack so the PP of the door is quartered to 8 , just barely stopping the bolt. The 6 damage in excess of the reduced AP are quartered further reducing the door to 108 HP and 348 totHP.

On the other hand, a mercenary chopping his way through the barred door of an inn ( $1 / 2^{\prime \prime}$ wood: 8 PP, $1 \mathrm{AP}, 30 \mathrm{HP}, 45$ totHP) with his battle axe doing $1 \mathrm{~d} 6+1 \mathrm{~d} 8$ damage per hit. His automatic advantage against the door allows him to attack for an extra 1 d 6 of damage so in actuality he does $2 \mathrm{~d} 6+1 \mathrm{~d} 8$. He rolls badly on his first swing and only gets 8 points of damage. The axe bites into the wood, but doesn't quite penetrate (leaving 23 HP and 38 totHP). He hauls back and tries again, doing better with a roll of 14 . This time the axe head sinks through the door and does 13 points of damage ( 10 HP and 28 totHP). The third swing of 10 points of damage leaving the door with 4 HP and 19 totHP.

Material Toughness

| Material | $P P /$ inch | maxAP | $H P$ | Density | HP/pound |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Leather | 17 | 0 | $35 / \mathrm{ft}^{3}$ | $48 \mathrm{lbs} / \mathrm{ft}^{3}$ | $3 / 4$ |
| Rope fiber | 20 | 0 | $16 / \mathrm{ft}^{3}$ | $16 \mathrm{lbs} / \mathrm{ft}^{3}$ | 1 |
| Wood | 15 | 1 | $60 / \mathrm{ft}^{3}$ | $30 \mathrm{lbs} / \mathrm{ft}^{3}$ | 2 |
| Plywood | 22 | 2 | $140 / \mathrm{ft}^{3}$ | $35 \mathrm{lbs} / \mathrm{ft}^{3}$ | 4 |
| Hardwood | 30 | 2 | $240 / \mathrm{ft}^{3}$ | $45 \mathrm{lbs} / \mathrm{ft}^{3}$ | $51 / 3$ |
| Bone | 40 | 2 | $440 / \mathrm{ft}^{3}$ | $110 \mathrm{lbs} / \mathrm{ft}^{3}$ | 4 |
| Mud Brick | 20 | 1 | $280 / \mathrm{ft}^{3}$ | $140 \mathrm{lbs} / \mathrm{ft}^{3}$ | 2 |
| Brick | 30 | 2 | $220 / \mathrm{ft}^{3}$ | $110 \mathrm{lbs} / \mathrm{ft}^{3}$ | 2 |
| Fired Clay | 45 | 3 | $140 / \mathrm{ft}^{3}$ | $90 \mathrm{lbs} / \mathrm{ft}^{3}$ | $15 / 9$ |
| Stone | 50 | 3 | $320 / \mathrm{ft}^{3}$ | $160 \mathrm{lbs} / \mathrm{ft}^{3}$ | 2 |
| Pot Metal | 80 | 3 | $4,620 / \mathrm{ft}^{3}$ | $450 \mathrm{lbs} / \mathrm{ft}^{3}$ | $10^{1 / 4}$ |
| Cast Iron | 120 | 4 | $6,000 / \mathrm{ft}^{3}$ | $450 \mathrm{lbs} / \mathrm{ft}^{3}$ | $131 / 3$ |
| Iron | 180 | 5 | $7,200 / \mathrm{ft}^{3}$ | $490 \mathrm{lbs} / \mathrm{ft}^{3}$ | $142 / 3$ |
| Steel | 200 | 6 | $8,640 / \mathrm{ft}^{3}$ | $500 \mathrm{lbs} / \mathrm{ft}^{3}$ | $171 / 4$ |
| Hardened Steel | 240 | 7 | $10,080 / \mathrm{ft}^{3}$ | $485 \mathrm{lbs} / \mathrm{ft}^{3}$ | $20^{3 / 4}$ |

## Object Shape

| Object | Dimensions | Volume | $H P$ |
| :--- | :---: | :---: | :---: |
| Door | $6^{\prime} \times 3^{\prime} \times 1 / 2^{\prime \prime}$ | $3 / 4 \mathrm{ft}^{3}$ | 2 |
| Heavy Door | $6^{\prime} \times 3^{\prime} \times 1^{\prime \prime}$ | $1^{1 / 2} \mathrm{ft}^{3}$ | 4 |
| Small link | $1 / 4^{\prime \prime} ; 3 / 8^{\prime \prime} ; 1^{\prime \prime}$ | $1 / 8 \mathrm{in}^{3}$ | $1 / 10$ |
| Link | $1 / 2^{\prime \prime} ; 3^{\prime \prime \prime} ; 1^{112}$ | $7 / 8 \mathrm{in}^{3}$ | $1 / 6$ |
| Large link | $1^{\prime \prime} ; 1^{1 / 4^{\prime \prime} ;} ; 2^{1 / 2 \prime}$ | $57 / 8 \mathrm{in}^{3}$ | $1 / 3$ |

Barely hanging on its hinges the door itself cringes before the fourth blow which does 8 points of damage. Having no HP left the door is no longer a barrier, but there are 12 totHP worth of pieces left.
Note, in this example the mercenary was trying to destroy the door and attacking it. If instead he had been trying to swing his axe through the door it would actually have still been standing. Let's go through the example again, but assume he is trying to hit someone bracing the door with a shoulder.
The first hit does 8 points of damage and doesn't penetrate so there is no difference and the door is left with 23 HP and 38 totHP. The second swing however does 14

| Material Toughness |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Material | PP/inch | $A P$ tot | otHP/pound | HP |  |  |
| Leather | 17 | 0 | 612 | $\times 17$ |  |  |
| Rope fiber | 20 | 0 | 1002 | $\times 13$ |  |  |
| Softwood | 7 | 0 | 605 | $\times 7$ |  |  |
| Wood | 15 | 1 | 806 | $\times 14$ |  |  |
| Plywood | 22 | 2 | 987 | $\times 20$ |  |  |
| Hardwood | 30 | 2 | 1075 | $\times 28$ |  |  |
| Bone, dry | 40 | 2 | 149 | $\times 10$ |  |  |
| Mud Brick | 20 | 1 | 23 | $\times 2$ |  |  |
| Brick | 30 | 2 | 220 | $\times 14$ |  |  |
| Bisqued Clay | 30 | 2 | 220 | $\times 14$ |  |  |
| Fired Clay | 45 | 3 | 538 | $\times 28$ |  |  |
| Stone | 50 | 3 | 254 | $\times 24$ |  |  |
| Pot Metal | 80 | 3 | 222 | $\times 58$ |  |  |
| Cast Iron | 120 | 4 | 223 | $\times 58$ |  |  |
| Iron | 180 | 5 | 617 | $\times 175$ |  |  |
| Steel | 200 | 6 | 670 | $\times 194$ |  |  |
| Hardened Steel | 240 | 7 | 623 | $\times 175$ |  |  |
| Common Objects |  |  |  |  |  |  |
| Object |  | nensions | Volume | HP/PP | wood | iron |
| Door |  | × $3^{\prime} \times 1 / 2^{\prime \prime}$ | $3 / 4 \mathrm{ft}^{3}$ | 2 | 8/18k | 90/226k |
| Heavy door |  | $\times 3^{\prime} \times 1^{\prime \prime}$ | $11 / 2 \mathrm{ft}^{3}$ | 4 | 15/36k | 180/453k |
| Small link |  | ; 3/8"; 1 " | $1 / 8 \mathrm{in}^{3}$ | $1 / 10$ | (2) | (22) |
| Link |  | 3/4"; $1^{1 / 2}{ }^{\prime \prime}$ | " $7 / 8 \mathrm{in}^{3}$ | 1/6 | 8/12 | 90/153 |
| Large link | 1"; | $11 / 4 " ; 21 / 2{ }^{\prime \prime}$ | " $57 / 8 \mathrm{in}^{3}$ | 1/3 | 15/82 | 180/1028 |
| Interior wall |  | $\times 5^{\prime} \times 6^{\prime \prime}$ | $20 \mathrm{ft}^{3}$ | ? |  |  |

damage, potentially doing 6 damage to someone behind the door and leaving the door with 16 HP and 31 totHP. The third swing does 10 damage, potentially doing 2 damage to someone behind the door and leaving the door with 9 HP and 24 totHP. The fourth blow fails to penetrate and leaves the door with 2 HP and 17 totHP. There isn't a whole lot left of the door at this point, but it is still there.

## Siege Engines

When dealing with large, thick walls one usually uses large, powerful weapons. Siege engines are the obvious choice for those seeking to breach stronghold walls. To avoid the inflation of large hit point values, the concept of Structure Points are used instead. 10 SP represents a five-foot section of stone
wall that is five feet in height and one foot thick.
Each SP is then roughly equivalent to 360 points of damage. A siege engine used against smaller targets simply demolishes them.

The target-size for such weapons is considered to be a hex-in otherwords about a $5^{\prime}$ diameter area. To shoot more precisely is very difficult, if not impossible, with this kind of weapon.

For example, a seige engineer fires a catapult at a castle wall which is $20^{\prime}$ thick stone and does 3 SP of damage. A section of wall about one foot thick and three feet across is powdered or slides to the ground leaving the remaining wall with 197 SP. 70 or so more hits like that will make a sizeable breach in the wall.

## Tim Doty

## Tying Knots

There is no specific skill for tying knots, any one of several skills can be used for this purpose.
Primarily, these are Boat and Sail. An attempt to tie a knot is resolved by rolling against the skill with a bonus of 6 . The better the level of success the better the knot is tied. To untie a knot requires a similar roll (excepting, of course, slip knots). If the character so desires he can tie a complex of knots-this removes the 6 bonus both for the tying and for any attempt to untie the knot.

## HaZARd8

There are many more hazards that face intrepid adventurers than mere combat. The toll of fatigue is examined first, followed by morale. Then the basic needs (food, water and sleep) are covered. These are followed by drunkenness, poison and disease with fire and falling to round things out.

## Fatigue

There are two types of fatigue: short term (like that accrued during combat) and long term (as from traveling). Short term fatigue can exhaust a character, but long term fatigue will make them boneweary. The more encumbered a character is the more fatigue is incurred.

## Encumberance

A character's Encumberance level is determined by his STR and how much weight is being carried. Carried weight reflects the total weight of everything carried by the character, including his clothing. The weights given on the Encumberance table represent the most weight that a character can be carrying and still be considered to be at that level of Encumberance.

The Enc score is a measure of how quickly the character incurs fatigue. In combat this is the amount per round. The adjAGI column gives the adjusted AGI which is used to calculate movement as well as to make any AGI rolls. The Pen column indicates the penalty for any agility based skills.

## Short Term

An active character, such as one engaged in combat or running, incurs fatigue points as indicated for his Encumberance level. This fatigue can be quickly recovered through resting at a rate dependent on the character's END as found on the Fatigue Recovery table.

## Long Term

Every fifth point of fatigue that a character incurs after a rest results in one point of long term fatigue (LFP). Such fatigue is only recovered through sleep or long rests: the

| Heat |  |  |
| :---: | :---: | :---: |
| In hot weather fatigue can be increased, or even |  |  |
| simply accrued due to exposure. Although the |  |  |
| thresholds vary from creature to creature the following guidelines are appropriate for most |  |  |
|  |  |  |
| situations. |  |  |
| Level | Temperature | Fatigue |
| One | $\mathrm{CON}+90^{\circ}$ | $\times 11 / 2 \mathrm{FP}$ accrual |
| Two | $\mathrm{CON}+100^{\circ}$ | $\times 2 \mathrm{FP}$ accrual |
|  |  | 1 FP per hour |
| Three | $\mathrm{CON}+110^{\circ}$ | $\times 3 \mathrm{FP}$ accrual |
|  |  | 1 FP per 15 minutes |
| Four | $\mathrm{CON}+120^{\circ}$ | $\times 5 \mathrm{FP}$ accrual |
|  |  | 1 FP per minute |
| Five | $\mathrm{CON}+130^{\circ}$ | $\times 8 \mathrm{FP}$ accrual |
|  |  | 1 Heat damage per round |

number of LFP recovered per hour is the same as the number of regular FP recovered every round.

## Morale

A character's morale is represented by Morale points. Under normal circumstances Morale starts at zero and cannot exceed the character's Discipline skill level.

A character's morale affects, among other things, his chance of success in his endeavors. Although morale is most often used in conjunction with combat that is not the only case: it is applicable wherever determination and confidence are factors. Underworld dealings and high politics are two areas that come readily to mind.

There are three general categories of action with respect to morale: offensive, defensive and other. To illustrate with combat an offensive action is an attack: be it unarmed, melee, missile or magical. A defensive action is one which counters some offensive action or otherwise protects the character. All other actions fall into the "other" category.

## Encumberance

| Encumberance |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Level | Weight | Enc | adjAGI | Pen |
| Unencumbered | $\mathrm{STR}^{2} \times 1 / 10$ | 1 | AGI | 0 |
| Lightly Encumbered | $\mathrm{STR}^{2} \times 1 / 4$ | 2 | AGI $\times 3 / 4$ | 3 |
| Encumbered | $\mathrm{STR}^{2} \times 1 / 2$ | 3 | AGI $\times 1 / 2$ | 6 |
| Heavily Encumbered | $\mathrm{STR}^{2}$ | 5 | AGI $\times 1 / 4$ | 10 |
| Extremely Encumbered | - | 10 | AGI $\times 1 / 10$ | 25 |

## Tim Doty

Magic can walk a fine line between these categories. Casting a spell which is resisted is definitely an offensive action. The classification of other spell castings is up to the referee, but normally if it is not offensive it is defensive.

## Morale Status

A character's Morale Status is determined by his Morale score. A character is Confident when Morale points are one or more and Normal when Morale is zero. Morale points of -1 result in the character being Disheartened, -2 indicates that the character is Demoralized, -3 that the character is Scared, -4 that the character is Terrified and -5 that the character is Petrified. Detailed descriptions of these status is as follows.
Confident: All actions the character takes are at a bonus of 5\% Morale. Morale points cannot exceed the character's Discipline skill level except by magic. [Note that overconfidence is false confidence and does not net a bonus: any bonus for confidence is offset by penalties for stupidity due to over reaching confidence.]
Normal: The character has self-confidence, but no especial faith. There is no bonus or penalty for being at this status.

Disheartened: The character's heart is not in the action at hand which has the effect of halving all final skill chances directed outward. In other words, in combat all offensive actions have their chance halved but defensive actions are not affected. Spell casting is considered to be offensive if there is a resistance roll involved.
Demoralized: The character is demoralized and will back up if possible (looking for an exit). If a retreat is not possible then a Discipline roll is required to avoid dropping another status level. The character will not undertake any offensive action (as defined previously), but defensive actions are at normal chance.

Scared: The character is scared and will run away if possible. If a retreat is not possible then a Discipline roll is required to avoid dropping another status level. The character will not undertake any offensive action (as defined previously) and defensive actions are at half
chance-unless another Discipline roll was called for and it succeeded. In such a case the morale status does not change, but is modified to Cornered. A Cornered character will make no defensive action, but makes all offensive actions at full chance.
Terrified: The character is striken with fear and will throw down weapons and surrender if possible. If surrender is not possible a Discipline roll is required to avoid dropping another status level. The character will take no combat actionunless another Discipline roll was called for and it succeeded. In such a case the morale status does not change, but is modified to Frantic. A Frantic character will attempt to engage in melee the nearest opponent and can only use Brawl, but with a bonus of $25 \%$.
Petrified: The character is in abject fear and will gibber in terror. In other words the character is completely incapacitated in any functional sense.

## Morale Boost

A leader can exhort followers (by use of the Leadership skill) to action and greater confidence. Doing so requires at least one minute and can only benefit those within POW 100 feet. The effect is to adjust the followers' Morale by the level of success. Thus a fumble reduces the Morale of all those affected by two points and a critical increases the Morale of all those affected by three points. The effect of this modification will not last more than CHA hours.

## Morale Check

A morale check is called for whenever a character's morale faces a shock. A morale check is resolve by a Discipline roll with the level of success adjusting the character's Morale Status. The level of success is reduced by the number and degree of shocks. Note that morale is not ever increased by such a roll, only prevented from decreasing. Examples of a shock to morale are taking an injury, an apparently disabling blow not affecting an opponent, a slain opponent getting back up and the loss of an ally or arrival of enemy reinforcements.

A morale check caused by taking an injury starts

| Food and Water Requirements |  |  |  |  |  |  |
| :--- | ---: | :---: | ---: | ---: | ---: | :--- |
| Race | Per Day | Subsistence | +1 ration | Per Day | +1 quart | -1 Attribute |
| Centaur | 12 rations | 8 rations | 1 FP | 18 quarts | $11 / 2 \mathrm{FP}$ | per 9 quarts |
| Dólgfin | 3 rations | 2 rations | 8 FP | 2 quarts | 12 FP | per quart |
| Drakkonian | 6 rations | 4 rations | 1 FP | 3 quarts | 8 FP | per $1 / 1 / 2$ quarts |
| Dwarf | 5 rations | 3 rations | 5 FP | $21 / 2$ quarts | 10 FP | per 2 quarts |
| Elf | $21 / 2$ rations | $13 / 4$ rations | 10 FP | $13 / 4$ quarts | 14 FP | per quart |
| Gnoll | $31 / 2$ rations | $21 / 2$ rations | 7 FP | $2 \frac{1}{4}$ quarts | 10 FP | per quart |
| Gnome | 2 rations | $11 / 2$ rations | 12 FP | 1 quart | 24 FP | per $1 / 2$ quart |
| Goblin | 2 rations | $11 / 2$ rations | 12 FP | $11 / 2$ quarts | 16 FP | per $3 / 4$ quart |
| Halfling | 4 rations | $21 / 2$ rations | 6 FP | $11 / 2$ quarts | 16 FP | per $3 / 4$ quart |
| Hobgoblin | 1 ration | $1 / 2$ ration | 2 FP | $11 / 4$ quarts | 20 FP | per 2 quarts |
| Human | 3 rations | 2 rations | 8 FP | 2 quarts | 12 FP | per quart |
| Kobold | $11 / 2$ rations | 1 ration | 16 FP | 1 quart | 24 FP | per $1 / 2$ quart |
| Lizardman | 6 rations | 4 rations | 1 FP | 5 quarts | 5 FP | per quart |
| Orc | $41 / 2$ rations | 3 rations | 5 FP | 3 quarts | 8 FP | per $11 / 2$ quarts |
| Pixie | - rations | - rations | -FP | - quarts | -FP | negligible |
| Reptileman | 6 rations | 4 rations | 1 FP | 3 quarts | 20 FP | per 2 quarts |
| Sidhe | 2 rations | $11 / 2$ rations | 12 FP | 1 quart | 24 FP | per $1 / 2$ quart |

with a morale modifier of zero. Being knocked back increases the severity by one, being knocked down increases it by two. It is also increased by the blood loss score. Thus a tearing attack that achieved a special success and did a serious wound to the character's head would cause an increase of four points.

Likewise the arrival of enemy reinforcements starts with a morale modifier of zero that is increased by one for every doubling of the odds against the character.

## Recovering Morale

A rest or break from the trying circumstances related to the character's morale allows recovery. The character's Discipline skill level is the number of Morale points recovered in an hour. Thus a character with Discipline skill level 1 would take three hours to recover from being Scared.
Alternatively, a leader can try to rally his followers.
To do so requires at least one minute and a Leadership skill roll, again only benefiting those within POW 100 feet.

## Food

Although nutrition is beyond the scope of this game, characters must get enough to eat or they will
slowly starve to death. In game terms a character who is getting the nominal amount of food for their race, or more, is doing alright. A character who is getting less than that, but at least subsistence level, will not die though they will suffer from lack of proper nutrition. Any character not even getting subsistence level will slowly starve to death. An active character requires additional food - exactly what constitutes active and additional food is up to the referee.

These rules provide a very simplistic view of diet and nutrition. A normal meal for an average human is considered to be "one ration." For ease of play, "rations" are even listed on the price list. The actual content of these "rations" would actually differ by race and an enterprising referee could make a ration equivalency table: one elf-ration might equal half a ration for a dwarf due to dietary differences. A dwarf-ration might cost more due to the relative expense of the food stuffs involved.

## Subsistence

Every second day of living at subsistence level lowers STR and END by one point, though neither will be reduced below one. Each week of living like this lowers CON by one point. When CON reaches zero the character will die. All losses are temporary
and are recovered at the rate of one point per day of adequate food, water and rest.

## Starving

A character who is starving will lose one point of STR and END every day and one point of CON every second day. Although neither STR nor END will drop below 1 , the character will die when CON reaches zero. All losses are temporary and are recovered at the rate of one point per day of adequate food, water and rest.

## Water

The amount of water required by a creature depends on its environment and what it is doing. For each water ration past the first which is required but not consumed the creature suffers the penalty listed for their race to STR, CON and END. If CON is reduced to half normal then the character is considered to be severely dehydrated and cannot recover through rest and water-additional medical or magical attention is required. If CON is reduced to zero the character dies. A character whose STR or END is reduced to zero becomes an invalid.

As a rule of thumb $90^{\circ}$ weather increases water requirements by $50 \%, 100^{\circ}$ weather doubles water requirements and $110^{\circ}$ weather triples water
requirements.
For every half-hour of continued activity after accruing a penalty the character must make a CON/10 roll to avoid suffering heat exhaustion. The difficulty is increased by 5 for every time the character has ever suffered heat exhaustion in the past. A fumbled roll or three consecutive "heatexhaustion" results indicate that the character suffers a heat stroke and will die in $\mathrm{CON} \times 3$ minutes without medical or magical intervention.

## Sleep

Regardless of fatigue recovery a character requires a minimum amount of sleep each night to avoid sleep deprivation. A character can go a number of hours as indicated under the Waking column of the Sleep Requirements table without penalty. The minimum amount of required sleep is indicated by the Required Sleep column. If the character remains awake longer than his allotted waking hours or does not get the minimum amount of sleep then he incurs fatigue just for being awake at the rate give under the Fatigue Rate column.

If fatigue points lost due to sleep deprivation exceed a character's WIL (modified for Discipline) then the character becomes very loopy and ineffective. At twice the character's WIL the character

## Sleep Requirements

| Race | Waking | Fatigue Rate | Required Sleep |
| :---: | :---: | :---: | :---: |
| Centaur | CON $\times 2$ hours | 1 LFP / 2 hours | $101 / 2$ - (1/4 CON) hours |
| Dólgfín | CON $\times 2$ hours | 1 LFP / 11/2 hours | $12-(1 / 4 \mathrm{CON})$ hours |
| Drakkonian | CON $\times 11 / 2$ hours | 1 LFP / hour | $11-(1 / 4 \mathrm{CON})$ hours |
| Dwarf | $\mathrm{CON} \times 2$ hours | 1 LFP / 2 hours | $10-(1 / 4 \mathrm{CON})$ hours |
| Elf | CON $\times 2 \frac{1}{2}$ hours | 1 LFP / hour | $9-(1 / 4 \mathrm{CON})$ hours |
| Gnoll | CON $\times 2$ hours | 1 LFP / hour | $101 / 2-(1 / 4 \mathrm{CON})$ hours |
| Gnome | CON $\times 11 / 2$ hours | 1 LFP / hour | $91 / 2$ - ( $1 / 4 \mathrm{CON}$ ) hours |
| Goblin | CON $\times 2$ hours | 1 LFP / hour | $101 / 2-(1 / 4 \mathrm{CON})$ hours |
| Halfling | CON $\times 11 / 2$ hours | 1 LFP / hour | $14-(1 / 4 \mathrm{CON})$ hours |
| Hobgoblin | CON $\times 3 / 4$ hours | $1 \mathrm{FP} / 15$ minutes | $7-(1 / 4 \mathrm{CON})$ hours |
| Human | CON $\times 2$ hours | 1 LFP / hour | $101 / 2-(1 / 4 \mathrm{CON})$ hours |
| Kobold | CON $\times 1$ hours | 1 LFP / hour | $8-(1 / 4 \mathrm{CON})$ hours |
| Lizardman | CON $\times 1$ hours | 1 LFP / 30 minutes | $131 / 2-(1 / 4 \mathrm{CON})$ hours |
| Orc | CON $\times 2$ hours | 1 LFP / hour | $101 / 2-(1 / 4 \mathrm{CON})$ hours |
| Pixie | CON $\times 3 / 4$ hours | 1 LFP / 15 minutes | $240-(5 \times \mathrm{CON})$ minutes |
| Reptileman | CON $\times 1$ hours | 1 LFP / hour | $11-(1 / 4 \mathrm{CON})$ hours |
| Sidhe | CON $\times 2$ hours | $1 \mathrm{FP} /$ hour | $8-(1 / 4 \mathrm{CON})$ hours |

becomes temporarily insane.

## Drunkenness

A character is affected by what they drink and drinking is very common in most fantasy worlds. These rules can be used to determine how much a character is affected by alcohol.

Although in reality there are many factors which, in combination, determine someone's tolerance this is abstracted in the game as the character's HP.

Drinks are rated for alcoholic content (ACP) by taking the strength of the drink (proof) times the
size (in fluid ounces) and dividing by twelve. Because a normal mug or drinking jack has a capacity of twelve fluid ounces one "drink" has an alcoholic content rating equal to its proof rating.

If a character is drinking on an empty stomach all alcohol points are effectively doubled.

## Recovery

Alcohol is a poison that is removed from the system primarily through the efforts of the liver. The efficiency of this system is represented by the character's HP—a healthy individual can eliminate a number of ACP in an hour equal to half their HP.

| State of Drunkeness |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Status | Drunk | Threshold | adjSkill | Speak | Stand up | Attribute | Sick |
| Normal | 0 | 0 | +0 | - | $100 \%$ | 0 | - |
| Slightly Buzzed | 1 | $\mathrm{HP} \times 1$ | +0 | 15 | $100 \%$ | 0 | - |
| Buzzed | 3 | $\mathrm{HP} \times 2$ | -1 | 9 | $100 \%$ | 0 | - |
| Mildly Drunk | 6 | $\mathrm{HP} \times 3$ | -5 | 7 | $100 \%$ | -1 | - |
| Drunk | 10 | $\mathrm{HP} \times 4$ | -10 | 6 | $99 \%$ | -3 | $\mathrm{CON} / 1$ |
| Very Drunk | 15 | $\mathrm{HP} \times 5$ | -20 | 3 | $70 \%$ | -6 | $\mathrm{CON} / 10$ |
| Falling Down Drunk | 21 | $\mathrm{HP} \times 6$ | -40 | 2 | $25 \%$ | -10 | $\mathrm{CON} / 30$ |
| Dead | $\mathrm{nP} \times 10$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ |  |
| Drunk: Points of drunkeness | HP |  |  |  |  |  |  |
| Threshold: ACP to reach the state |  |  |  |  |  |  |  |
| adjSkill: Penalty for all skills except for Speak [Language]. |  |  |  |  |  |  |  |

Speak: Maximum chance with any Speak skill.
Stand Up: This is rolled to stand up or anytime balance is required (e.g., make an attack, dodge). A Falling Down Drunk character must roll this for every round of movement.

| Success | Result |
| :--- | :--- |
| Critical | No visible effect |
| Special | Reasonable coordination (e.g., can walk a straight line) |
| Normal | Staggering |
| Miss | Stop fall with three-point contact |
| Failure | Fall to hands and knees |
| Fumble | Fall flat on face (take falling damage for height) |

Attribute: Reduction to a character's effective WIT, WIL, DEX and AGI, though never reduced below racial minimum. This affects, for example, AGI saves or WIL resistance rolls.

Sick: The character must get a normal or better success immediately upon entering the level and every hour thereafter to avoid getting sick. A miss means a queasy stomach that if aggravated (e.g., eating fatty foods, running, fighting, etc.) will cause the character to puke. A failure causes the character to puke. A fumble means the character pukes his guts out. If there isn't anything left to puke the character takes 1 point of damage to the abdomen from the dry heaves per level of fumble. However, if a character pukes then he eliminates half of the alcohol points consumed in the last half hour.

Dwarves are particularly efficient in this regard and can eliminate a number of ACP in an hour equal to their HP. It is generally not wise to get into a drinking contest with a dwarf.

## Drunkenness

The state of a character is represented by seven levels from normal to drunk to dead. Their state is determined by the current amount of ACP in their body and their alcoholic tolerance which is represented by their CON. A character who rarely drinks would have a lower than normal tolerance and a heavy drinker would have increased tolerance.

Making adjustments in either direction is up to the referee, but it is suggested that tolerance not be reduced by more than half and that if tolerance levels are increased that the character's CON be lowered due to the amount of liver damage from the excessive amount of drinking.

## Passing Out

If a character is Very Drunk or worse then they must make a CON roll to avoid passing out. If they are Very Drunk the roll is made every 30 minutes, but a Falling Down Drunk must roll every 15 minutes. The first roll has a resisting score of 5 . Each successive roll has a resisting score of five higher. For example, the fourth roll would be against a resisting score of 20.

## Hangover

If a character wakes up with any alcohol points they are hungover. The penalty to skills is equal to remaining ACP.

## Fire

There are two primary characteristics of a fire: its size and its intensity. The size can be "point" indicating a candle or torch, or anything from one hex and up. Although the intensity of a fire may actually vary from hex to hex it is most commonly assumed that all parts of the fire burn with the same intensity. A fire will continue to burn until it runs out of fuel, but determining that is beyond the scope of these rules.

The intensity of flames depend on a combination of factors, such as the the fuel being burned and the amount of air getting into the core of the fire. A candle (or match) has an intensity of 1-they

| Alcholic Drinks |  |  |  |
| :--- | :---: | :---: | :---: |
| Drink | Proof | Size | ACP |
| Beer | 5 | 12 | 5 |
| Ale | 10 | 12 | 10 |
| Mead | 20 | 12 | 20 |
| Cheap Wine | 40 | 12 | 40 |
| Wine | 30 | 12 | 30 |
| Good Wine | 20 | 12 | 20 |
| Whiskey | 80 | 4 | 27 |
| Strong Whiskey | 120 | 4 | 40 |

aren't particularly dangerous. Wood fires generally have an intensity from three to five. Coals generally burn hotter at around six to eight, although a furnace might have an intensity of twelve or higher.

The two most important things about fires, at least from a gaming perspective, are the ignition of a new fire (or the spreading of an existing fire) and the amount of damage done by contact with a fire.

## Ignition

As a rule of thumb it takes one or more consecutive rounds of sustaining one or more points of fire damage each round to ignite a fire. Fires spread by igniting fuel in adjacent hexes. The number of rounds required to ignite a fire vary with the materials in question. Paper, dry leaves and dry grass all burn readily requiring but a single point of damage over a single round to ignite them. In general, wood requires ten consecutive points of damage to ignite.

Conversely, the rule of thumb for putting out a fire is a number of gallons equal to the intensity times the number of hexes. Thus a three-hex fire of intensity 4 should take 12 gallons of water to extinguish.

## Damage

Direct contact with flame does damage for fire intensity on initial contact, and again every full four consecutive strike ranks, though not more than three times in a round. Initial contact damage from a flame to a target can only happen once per round so if direct contact ends and is restored during the same round then initial contact damage is not done again. The same fire can do initial damage to multiple targets in a round. Damage from fire is for adjSTR equal to one third fire intensity.

If a character starts the round already in contact with flame then damage is done in SR 8, and again on SR 4 and SR 0 . Thus a character in constant contact with flame takes damage three times per round, at the same times each round.

A torch used as a weapon is a flaming club and will do damage as appropriate for its size and composition. A "standard adventurer's torch" is equivalent to a baton while a "standard wall torch" is equivalent to a small club. In either case any hit while lit will do one quarter the normal fire damage (and can do this damage every strike rank). If the torch is held against the target then normal fire damage is done.

A flaming weapon lit with a natural fire is unlikely to remain lit during the course of normal fighting. For torches roll 1 d 8 after each attempt to hit. If the roll is less then the current fire intensity the fire drops to that intensity. If the roll is greater than the current fire intensity the fire goes out. If the torch is not used in melee and has a fire intensity less than normal roll 1 d 8 at the end of the round: if the roll is equal to or less than the current intensity the fire intensity increases by one.

## Falling

In general the damage taken from an uncontrolled fall is 6 adjSTR crushing for every 10 feet. For humans, and most other intelligent races, terminal velocity is $3 \mathrm{~d} 10+2 \mathrm{~d} 12$ damage. Although there are many details which affect both the damage rate for a given height and terminal velocity for simplicity these are over looked.

Armor provides only partial protection from damage taken in a fall. Except for padding, armor cannot stop more than four points of damage. Thus if padding worth 2 AP is worn with plate armor then the total protection from the fall is 6 AP . Falling damage will generally affect 1 s6 locations with the damage divided up between them evenly. Damage taken from a fall can be reduced by landing properly. There are two ways of doing this: Acrobatics and Jump. Each level of success with Acrobatics lowers the effective height of the fall by ten feet. Each level of success with Jump lowers the effective height of the fall by five feet so, if all else is equal, Acrobatics is the better skill to use.

| Falling Damage <br> Size |  |  |
| :--- | :---: | :---: |
| adjSTR per $10^{\prime}$ | Max Fall |  |
| Extremely Tiny | $1 / 4$ | $40^{\prime}$ |
| Very Tiny | $1 / 2$ | $60^{\prime}$ |
| Tiny | 1 | $80^{\prime}$ |
| Very Small | 2 | $115^{\prime}$ |
| Small | 3 | $140^{\prime}$ |
| Medium Small | 4 | $165^{\prime}$ |
| Medium | 6 | $200^{\prime}$ |
| Medium Large | 8 | $230^{\prime}$ |
| Large | 10 | $260^{\prime}$ |
| Very Large | 12 | $285^{\prime}$ |
| Huge | 14 | $305^{\prime}$ |
| Enormous | 16 | $325^{\prime}$ |
| Titanic | 18 | $345^{\prime}$ |
| Gargantuan | 20 | $365^{\prime}$ |

## Free Fall

A character, creature or object in free fall is subject only to gravity (and wind resistance) and will fall at the rate of 32 feet per second per second (well, less than that once sufficient velocity is attainedaccounting for wind resistance is beyond the scope of these rules). If the character was motionless before free fall started then in the first five SR he will descend 144 feet, or about 29 hexes.

## Drowning

Any character in water can drown: all it takes is for the mouth and nose to be submerged to cause asphyxiation. In shallow water this is normally only a risk if the character is unconscious, but in deep water, especially in an ocean, a character must work to stay afloat.

| Free Fall |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $S R$ | Height | Hexes | Velocity | $M v$ |
| 1 | $6^{\prime}$ | 1 | 19 fps | 12 |
| 2 | $23^{\prime}$ | 5 | 38 fps | 23 |
| 3 | $52^{\prime}$ | 10 | 58 fps | 35 |
| 4 | $92^{\prime}$ | 18 | 77 fps | 46 |
| 5 | $144^{\prime}$ | 29 | 96 fps | 58 |
| 6 | $207^{\prime}$ | 41 | 115 fps | 69 |
| 7 | $282^{\prime}$ | 56 | 134 fps | 81 |
| 8 | $369^{\prime}$ | 74 | 154 fps | 92 |
| 9 | $467^{\prime}$ | 93 | 173 fps | 104 |
| 10 | $576^{\prime}$ | 115 | 192 fps | 115 |

## Tim Doty

Swimming is tiring. Just treading water incurs fatigue every skill level rounds and actively swimming incurs fatigue every round. At skill level 0 fatigue is incurred twice a round (at SR 6 and again at SR 0). Dwarves, being particularly dense, incur fatigue every round even when treading water, and at skill level 0 they incur fatigue twice a round.

An encumbered character is especially penalized while swimming. As a rule of thumb the difficulty of swimming is increased by the number of pounds carried in excess of the character's unencumbered weight. Anything that would specifically impede swimming (such as holding something in a hand) is an additional penalty of 6 .

A character in water is considered to be in one of three states: swimming, thrashing and drowning. A character who is swimming may be just treading water or trying to make headway. The amount of movement allowed depends on the swim skill roll for the round. On a failure the character starts thrashing and on a fumble the character starts drowning.

A character who is thrashing must make a swim skill roll every round to avoid drowning. A special success or better restores the character to the swimming state while any miss indicates drowning begins. While in the drowning state a swim skill roll is required each round to avoid taking damage. On a special success the character ceases drowning and begins thrashing while a critical success restores the character to the swimming state.

## Flight

When flying a creature lacks the solid footing of being on the ground-which is another way of saying he may be blown about. High winds are the bane of the flier as the buffeting can knock them out of the sky and flying into a gale is just plain difficult.

The degree of difficulty depends on the wind speeds, how gusty they are, the size and speed of the flier.

## Fly in High Winds

Size Mv Reduction

Extremely Tiny none
Very Tiny $\quad 1 \mathrm{Mv}$ per 20 mph

Tiny 2 Mv per 20 mph
Very Small 3 Mv per 20 mph
Small 4 Mv per 20 mph
Medium Small 5 Mv per 20 mph
Medium 6 Mv per 20 mph
Medium Large $\quad 7 \mathrm{Mv}$ per 20 mph
Large
Very Large
Huge
Enormous
Titanic
Gargantuan

8 Mv per 20 mph
10 Mv per 20 mph
12 Mv per 20 mph
14 Mv per 20 mph
16 Mv per 20 mph
18 Mv per 20 mph

## PERCEPTion

A11 that is hidden is not seen and all that is visible is not observed. How likely it is that a character obvserves any particular person or object depends on a variety of factors including size, contrast, distance and skill. While a thorough treatment of the subject is complex these rules strive for simplicity.

In particular it is presumed that anything that is visible is seen, though not necessarily observed. The distinction between the two is important and well illustrated by Edgar Allen Poe's The Purloined Letter. If something does not have evident importance the chance that any attention will be paid it is represented by the Notice skill. This is a passive skill meaning the referee rolls against it when appropriate, players do not need to make any declaration to get full benefit from it.

When spotting the earliest sign of some thing or action is important the Scan skill comes into play. This is typically used when on sentry duty or scouting ahead. This is an active skill-the player must declare that the character is scanning. Distance, illumination and obscuration form the primary determinants of difficulty. If what is being looked for is hidden, as with the Camouflage, Conceal or Hide skills, then it is particularly difficulty.

When making a detailed examination to find something the Search skill comes into play. The
primary determinants of difficulty are the degree to which what is being sought is obscured. There are two primary situations: one where the object being sought is known and the other where the object being sought is unknown. In the former the difficulty is simply the degree of concealment-if it is not concealed then it is automatically found. In the latter, however, only things which have been concealed-whether incidentally or by deliberate intent - can be found. The latter is an inherently more difficult task.

When discerning faint noises or making sense of muffled conversation is the task at hand the Listen skill is employed. It is not necessary to Listen for normal conversation, only if there is some particular difficulty due to it being broken up or muffled.

Feel, Smell and Taste are not required to feel or smell or taste, but rather to identify what is observed solely with those senses. Identification means to know the source of the sensory input, not the sensation that is perceived.

The remaining perception skills are specialized. Find Mark is assessment of a target for theft, whether or person or place, as to whether and how best to approach it. Shadow is used to keep quarry in sight while following in an unobtrusive, though not concealed, fashion. Track is more than recognizing footprints and includes putting together all traces left by a quarry to determine when the quarry was there and the direction of travel. Track also includes the ability to estimate various facts from the trace, such as how large the quarry might be, the number of quarry and so on.

| Penalty for Illumination |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Intensity | Vision Distance | Normal | Good | Excellent | Moon | Star | Dark | Heat | Perfect |
| Blinding | $\times 9$ | -100 | -100 | -100 | -100 | -100 | -100 | -100 | -100 |
| Dazzling | $\times 3$ | -10 | -10 | -10 | -20 | -30 | -40 | -10 | -6 |
| Brilliant | $\times 13 / 4$ | -4 | -4 | -4 | -6 | -8 | -10 | -4 | -2 |
| Bright | $\times 11 / 4$ | -1 | -1 | -1 | -2 | -3 | -4 | -1 | 0 |
| Strong | $\times 11 / 8$ | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 |
| Normal | $\times 1$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Weak | $\times 1 / 8$ | -2 | -1 | 0 | 0 | 0 | 0 | -2 | 0 |
| Twilight | $\times 3 / 4$ | -6 | -4 | -2 | -1 | 0 | 0 | -6 | 0 |
| Deep Twilight | $\times 1 / 2$ | -10 | -8 | -6 | -4 | -2 | -1 | -10 | 0 |
| Near Dark | $\times 1 / 4$ | -20 | -18 | -16 | -14 | -12 | -6 | -20 | -2 |
| Dark | $\times 1 / 16$ | -40 | -35 | -30 | -25 | -20 | -10 | -40 | -5 |

## Visual

A dominant factor in visual perception is illumination. Sources of illumination are rated in Illumination Points (IP) for how bright they are.
The distance from the source of light to what is being illuminated combined with IP determines the illumination category, ranging from blinding to dark. Past the dark distance is full dark where for all intents and purposes there is no illumination.

In the case of ambient light the illumination category is simply specified and bears the same penalty as for a normal light source. In addition, a character's base vision distance is modified for the

| Ambient Light |  |  |  |
| :--- | :---: | :---: | :---: |
| Intensity | Vision Distance | Penalty | Adjusted |
| Blinding | $\times 9$ | -100 |  |
| Dazzling | $\times 3$ | -10 |  |
| Brilliant | $\times 13 / 4$ | -4 |  |
| Bright | $\times 1 / 4$ | -1 |  |
| Strong | $\times 11 / 8$ | +0 |  |
| Normal | $\times 1$ | +0 |  |
| Weak | $\times 7 / 8$ | -2 | -1 |
| Twilight | $\times 3 / 4$ | -6 | -3 |
| Deep Twilight | $\times 1 / 2$ | -10 | -6 |
| Near Dark | $\times 1 / 4$ | -20 | -12 |
| Dark | $\times 1 / 16$ | -40 | -30 |
| Full Dark | $\times 0$ | -100 | -80 |

illumination category. Although especially bright light theoretically increases the base vision distance in practice it causes coping mechanisms, such as squinting, to come into play in an attempt to reduce the amount of light. This preserves the ability to see, but at the expense of the increased vision

## Fire Illumination

| Intensity | IP | Intensity | IP | Intensity | $I P$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $<1$ | 1 | $25-29$ | 10 | $90-99$ | 19 |
| 1 | 2 | $30-35$ | 11 | $100-109$ | 20 |
| 2,3 | 3 | $36-41$ | 12 | $110-120$ | 21 |
| 4,5 | 4 | $42-48$ | 13 | $121-131$ | 22 |
| $6-8$ | 5 | $49-55$ | 14 | $132-143$ | 23 |
| $9-11$ | 6 | $56-63$ | 15 | $144-155$ | 24 |
| $12-15$ | 7 | $64-71$ | 16 | $156-168$ | 25 |
| $16-19$ | 8 | $72-80$ | 17 | $169-181$ | 26 |
| $20-24$ | 9 | $81-89$ | 18 | $182-195$ | 27 |

distance.
In low light conditions-by definition any that give a penalty from lack of light-a character whose eyes have adjusted has a reduced penalty. Normally it takes half an hour for a character's eyes to adjust, but a character with good night vision adjusts in 15 minutes and a character with excellent night vision adjusts in 5 minutes. Further, a character with good night vision has the penalty for low light reduced by 1 and a character with excellent night vision reduced by up to 2 .

Other types of vision - moon-sight, star-sight and dark-sight-are better adapted for different lighting conditions. Characters with such sight take an extra penalty of 1,2 and 3 respectively if there is a penalty from bright or dim sunlight or firelight.
For example, an elf has a penalty of -7 when overcast to a "dim" illumination.

On the other hand these types of vision are better suited for other types of illumination such as moonlight, starlight, plant light and mage light.

## Moonlight

| Selected IP Sources |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Source | $I P$ | Examine | Read | Normal | Weak | Twilight | Deep | Near | Dark |
| Candle | 1 | $7{ }^{\prime \prime}$ | $11 / 2^{\prime}$ | $4^{\prime}$ | $11^{\prime}$ | $30^{\prime}$ | 81' | 220 ' | 595' |
| Improvised Torch | 2 | $8{ }^{\prime \prime}$ | $1{ }^{3 / 4}$ | 43/4' | $13 '$ | $36^{\prime}$ | 96 | 261' | $70{ }^{\prime}$ |
| Oil Lamp | 3 | $9{ }^{\prime \prime}$ | $2 '$ | 53/4' | $16^{\prime}$ | $42^{\prime}$ | 115 | 311' | $842{ }^{\prime}$ |
| Torch | 4 | 11 " | $21 / 2^{\prime}$ | 63/4' | $19^{\prime}$ | $50^{\prime}$ | 136' | 369 | 1,001' |
| Oil Wall Lamp | 5 | 13 " | 3' | $8{ }^{1 / 4}$ | $22^{\prime}$ | $60^{\prime}$ | $162{ }^{\prime}$ | 439' | 1,190' |
| Wall Torch | 6 | $16 "$ | $3^{1 / 2}{ }^{\prime}$ | $93 / 4{ }^{\prime}$ | $26^{\prime}$ | $71^{\prime}$ | 1931 | $522^{\prime}$ | 1,416' |
| Candelabra | 7 | 19 " | $41 / 4^{\prime}$ | $12^{\prime}$ | $31^{\prime}$ | 85' | 229 | $621^{\prime}$ | 1,684' |
| Advanced Oil Lamp | 8 | 22 " | 5' | $14^{\prime}$ | 37' | 101' | 272 | 739 ' | 2,002' |
| Gas Lamp | 15 | 61/4' | $17^{\prime}$ | $46^{\prime}$ | $125 '$ | $338{ }^{\prime}$ | 916 | 2,484' | 1.3 mi |

The light of the moon is softer than that of the sun and, though too weak to provide good illumination for characters with normal vision, those with moonsight have any penalty reduced by 4 while those with star-sight or dark-sight have the penalty reduced by 2 .

## Starlight

The least substantial light is that shed by the stars. Being practically ethereal it is of little use in providing illumination for normal-sighted folks and even those with moon-sight struggle a bit. Those possessing star-sight, however, see just fine. Characters with moon-sight have any penalty reduced by two, while those with star-sight have any penalty reduced by six. Characters with dark-sight have any penalty reduced by four.

## Plant Light

This is a weak, subtle light that is too thin for normal-sighted folks, but tolerable for others. Characters with moon-sight or star-sight have any penalty reduced by two. Those with dark-sight have any penalty reduced by six.

## Mage Light

Also known as færie light, all visions have the listed penalties. The light is, however, "tricksy" and cannot be entirely trusted. When making perception rolls the results of misses should be interpreted as failures, failures as fumbles, and fumbles as a fumble of the next higher step. The referee should be careful in relaying information as to what is seen and bear in mind that mage light may reveal things that are not there and conceal things that are.

## Natural Illumination

Source Type Illumination
Midday SunlightBright
Afternoon SunlightStrong
Morning SunlightStrong
Evening SunlightNormal
Twilight Sunlight Twilight
Deep Twilight Sunlight Deep Twilight
Full Moon Moonlight Twilight
Crescent Moon Moonlight Deep Twilight
Starlight StarlightNear Dark
Shade reduce one category
Cloudy reduce one category
Overcast reduce two categories

# Tim Doty 

## Illumination by IP

| $I P$ | Blind | Dazzle | Brilliant | Bright | Strong | Normal | Weak | Dim | Twilight | Deep | Dark |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| -10 | $0{ }^{\prime \prime}$ | $0{ }^{\prime \prime}$ | $0{ }^{\prime \prime}$ | $1{ }^{\prime \prime}$ | $3{ }^{\prime \prime}$ | $7{ }^{\prime \prime}$ | 20" | 41/2' | 12' | 33' | 88' |
| -9 | 0 " | $0{ }^{\prime \prime}$ | 0 " | $1{ }^{\prime \prime}$ | 3 " | $9{ }^{\prime \prime}$ | 23" | 51/4' | $14^{\prime}$ | $39^{\prime}$ | 105' |
| -8 | 0 " | $0{ }^{\prime \prime}$ | $1{ }^{\prime \prime}$ | $1{ }^{\prime \prime}$ | $4 "$ | $10 "$ | $21 / 4^{\prime}$ | 61/4' | 17 | 46 | 125' |
| -7 | 0 " | 0 " | $1 "$ | $2{ }^{\prime \prime}$ | 5" | 12 " | $23 / 4^{\prime}$ | $71 / 2^{\prime}$ | $20^{\prime}$ | $55^{\prime}$ | 149' |
| -6 | 0 " | 0 " | $1{ }^{\prime \prime}$ | $2{ }^{\prime \prime}$ | 5" | 15 " | $31 / 4^{\prime}$ | $9{ }^{\prime}$ | $24^{\prime}$ | $65^{\prime}$ | $177{ }^{\prime}$ |
| -5 | 0 " | 0 " | $1 "$ | 2" | 6 " | 17 " | $4^{\prime}$ | $11{ }^{\prime}$ | $29^{\prime}$ | $78^{\prime}$ | 210 ' |
| -4 | 0 " | 0 " | $1{ }^{\prime \prime}$ | 3" | 8" | 21" | $43 / 4^{\prime}$ | $13 '$ | $34^{\prime}$ | $92^{\prime}$ | $250{ }^{\prime}$ |
| -3 | 0 " | 0 " | $1 "$ | $3 "$ | $9{ }^{\prime \prime}$ | $2^{\prime}$ | 51/2' | $15 '$ | $41^{\prime}$ | $110{ }^{\prime}$ | 298' |
| -2 | 0 " | $1{ }^{\prime \prime}$ | $1{ }^{\prime \prime}$ | $4 "$ | 11" | $21 / 2^{\prime}$ | 61/2' | $18^{\prime}$ | $48^{\prime}$ | 131' | 354' |
| -1 | 0 " | $1{ }^{\prime \prime}$ | 2 " | 5" | 13 " | $3^{\prime}$ | $73 / 4{ }^{\prime}$ | $21^{\prime}$ | 57 | 155' | 421' |
| 0 | 0 " | $1 "$ | 2 " | $6 "$ | 15 " | $31 / 2^{\prime}$ | $9^{1 / 4}{ }^{\prime}$ | $25^{\prime}$ | $68^{\prime}$ | 185' | 501' |
| 1 | 0 " | $1{ }^{\prime \prime}$ | $2{ }^{\prime \prime}$ | $7{ }^{\prime \prime}$ | 18 " | $4^{\prime}$ | $11^{\prime}$ | $30^{\prime}$ | $81^{\prime}$ | 220 ' | 595' |
| 2 | 0 " | $1 "$ | 3" | 8" | 21" | $43 / 4^{\prime}$ | $13 '$ | $36^{\prime}$ | 96 | 261' | $70{ }^{\prime}$ |
| 3 | 0 " | $1 "$ | $3{ }^{\prime \prime}$ | $9{ }^{\prime \prime}$ | $2^{\prime}$ | 53/4' | $16^{\prime}$ | $42^{\prime}$ | $115{ }^{\prime}$ | 311' | 842' |
| 4 | $1{ }^{\prime \prime}$ | 2 " | $4 "$ | $11 "$ | $21 / 2^{\prime}$ | $6^{3} / 4^{\prime}$ | $19^{\prime}$ | $50^{\prime}$ | $136{ }^{\prime}$ | 369' | 1,001' |
| 5 | $1{ }^{\prime \prime}$ | $2{ }^{\prime \prime}$ | 5" | 13 " | $3^{\prime}$ | $8{ }^{1 / 4}{ }^{\prime}$ | $22^{\prime}$ | $60^{\prime}$ | $162^{\prime}$ | 439 ' | 1,190' |
| 6 | $1 "$ | $2{ }^{\prime \prime}$ | $6 "$ | $16 "$ | $31 / 2^{\prime}$ | $93 / 4{ }^{\prime}$ | $26^{\prime}$ | $71^{\prime}$ | 193' | 522 | 1,416' |
| 7 | $1{ }^{\prime \prime}$ | 3" | $7{ }^{\prime \prime}$ | 19 " | $41 / 4^{\prime}$ | $12^{\prime}$ | $31^{\prime}$ | $85^{\prime}$ | 229 | $621^{\prime}$ | 1,684' |
| 8 | $1{ }^{\prime \prime}$ | 3 " | 8" | 22" | 5' | $14^{\prime}$ | 37 | 101' | 272' | 739 ' | 2,002' |
| 9 | $1{ }^{\prime \prime}$ | $4{ }^{\prime \prime}$ | $10 "$ | $21 / 4^{\prime}$ | $6{ }^{\prime}$ | $16^{\prime}$ | $44^{\prime}$ | $120 '$ | $324{ }^{\prime}$ | 878' | 2,381' |
| 10 | $2 "$ | $4 "$ | 12 " | $23 / 4^{\prime}$ | $71 / 4^{\prime}$ | $19^{\prime}$ | $52^{\prime}$ | 142' | 385' | 1,044' | 2,831' |
| 11 | 2" | 5" | 14 " | $31 / 4^{\prime}$ | $81 / 2^{\prime}$ | $23 '$ | $62^{\prime}$ | 169 | 458' | 1,242' | 3,367' |
| 12 | $2{ }^{\prime \prime}$ | 6 " | $16 "$ | $3{ }^{3 / 4}$ | $10^{\prime}$ | $27^{\prime}$ | $74^{\prime}$ | 201' | $545{ }^{\prime}$ | 1,477' | 4,004' |
| 13 | 3" | $7{ }^{\prime \prime}$ | 20" | $41 / 2^{\prime}$ | $12^{\prime}$ | 33' | $88^{\prime}$ | 2391 | $648{ }^{\prime}$ | 1,757' | 4,762' |
| 14 | 3 " | $9{ }^{\prime \prime}$ | 23" | 51/4' | $14^{\prime}$ | $39^{\prime}$ | $105 '$ | 284' | $771{ }^{\prime}$ | 2,089' | 1.1 mi |
| 15 | $4 "$ | 10 " | $2^{1 / 4}{ }^{\prime}$ | 61/4' | $17^{\prime}$ | 46 | 125' | $338{ }^{\prime}$ | 916' | 2,484' | 1.3 mi |
| 16 | $4 "$ | 12" | $2^{3 / 4}$ | $71 / 2^{\prime}$ | $20^{\prime}$ | $55^{\prime}$ | $148{ }^{\prime}$ | 402' | 1,090' | 2,954' | 1.5 mi |
| 17 | 5" | $14 "$ | $31 / 4^{\prime}$ | 83/4' | $24^{\prime}$ | $65^{\prime}$ | 176 | 478' | 1,296' | 3,513' | 1.8 mi |
| 18 | 6 " | 17 " | $4^{\prime}$ | $11^{\prime}$ | $29^{\prime}$ | $77^{\prime}$ | $210{ }^{\prime}$ | $569{ }^{\prime}$ | 1,541 ${ }^{\prime}$ | 4,178' | 2.1 mi |
| 19 | 8" | 20" | $41 / 2^{\prime}$ | $13 '$ | $34^{\prime}$ | $92^{\prime}$ | 249 | 676' | 1,833' | 4,968' | 2.6 mi |
| 20 | $9{ }^{\prime \prime}$ | $2^{\prime}$ | 51/2' | $15^{\prime}$ | $40^{\prime}$ | 109 | 297' | 804' | 2,180' | 1.1 mi | 3.0 mi |
| 21 | 11" | $2{ }^{1 / 2}$ | 61/2' | $18^{\prime}$ | $48^{\prime}$ | $130^{\prime}$ | $353 '$ | 956' | 2,592' | 1.3 mi | 3.6 mi |
| 22 | 13 " | 23/4' | $73 / 4^{\prime}$ | $21^{\prime}$ | $57 '$ | 155' | $419{ }^{\prime}$ | 1,137' | 3,082' | 1.6 mi | 4.3 mi |
| 23 | 15 " | $31 / 2^{\prime}$ | 91/4' | $25^{\prime}$ | $68^{\prime}$ | 184' | 499' | 1,352' | 3,666' | 1.9 mi | 5.1 mi |
| 24 | 18" | $4^{\prime}$ | $11^{\prime}$ | $30^{\prime}$ | $81^{\prime}$ | 219 | 593' | 1,608' | 4,359' | 2.2 mi | 6.1 mi |
| 25 | 21" | $43 / 4^{\prime}$ | $13 '$ | $35^{\prime}$ | 96 | 260' | 705 | 1,912' | 1.0 mi | 2.7 mi | 7.2 mi |
| 26 | $2^{\prime}$ | 53/4' | $16^{\prime}$ | $42^{\prime}$ | $114{ }^{\prime}$ | 309 | 839' | 2,274 | 1.2 mi | 3.2 mi | 8.6 mi |
| 27 | $2^{1 / 2}{ }^{\prime}$ | $63 / 4{ }^{\prime}$ | $18^{\prime}$ | $50^{\prime}$ | 136 | 368' | 998' | 2,704 | 1.4 mi | 3.8 mi | 10 mi |
| 28 | $3^{\prime}$ | 8' | $22^{\prime}$ | $60^{\prime}$ | $161^{\prime}$ | 438' | 1,186' | 3,216' | 1.7 mi | 4.5 mi | 12 mi |
| 29 | $31 / 2^{\prime}$ | $93 / 4{ }^{\prime}$ | $26^{\prime}$ | $71^{\prime}$ | 192' | 520 | 1,411' | 3,825' | 2.0 mi | 5.3 mi | 14 mi |
| 30 | $41 / 4^{\prime}$ | $11^{\prime}$ | $31^{\prime}$ | $84^{\prime}$ | $228{ }^{\prime}$ | 619 | 1,678' | 4,548' | 2.3 mi | 6.3 mi | 17 mi |
| 31 | $5 '$ | $14^{\prime}$ | 37 | 100 | 272' | 736 | 1,995' | 1.0 mi | 2.8 mi | 7.5 mi | 20 mi |
| 32 | $6 '$ | $16^{\prime}$ | $44^{\prime}$ | 119 | 323' | 875' | 2,373' | 1.2 mi | 3.3 mi | 9 mi | 24 mi |
| 33 | 71 | $19^{\prime}$ | $52^{\prime}$ | 142 | 384 | 1,041' | 2,822 ${ }^{\prime}$ | 1.4 mi | 3.9 mi | 11 mi | 29 mi |

Illumination by IP

| $I P$ | Blind |  | Brillian | right | Stron | Normal | Weak | Dim | Twilight | Deep | Dark |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 34 | 81/2' | $23 '$ | $62^{\prime}$ | 168' | 457' | 1,238' | 3,356' | 1.7 mi | 4.7 mi | 13 mi | 34 mi |
| 35 | $10^{\prime}$ | 27 | 74 | 200 | $543 '$ | 1,472' | 3,991' | 2.0 mi | 5.6 mi | 15 mi | 1 mi |
| 36 | $12^{\prime}$ | $32^{\prime}$ | $88^{\prime}$ | $238{ }^{\prime}$ | 646 | 1,751' | 4,746' | 2.4 mi | 6.6 mi | 18 mi | 49 mi |
| 37 | $14^{\prime}$ | $39^{\prime}$ | $105{ }^{\prime}$ | 283' | $768{ }^{\prime}$ | 2,082' | 1.1 mi | 2.9 | 7.9 | 1 mi | mi |
| 38 | $17^{\prime}$ | 46 | 12 | $337{ }^{\prime}$ | 913' | 2,476' | 1.3 | 3.4 m | 9.3 | 5 mi | mi |
| 39 | $20^{\prime}$ | 55 | $148{ }^{\prime}$ | 401' | 1,086' | 2,944' | 1.5 | 4.1 m | 11 m | 0 mi | mi |
| 40 | $24^{\prime}$ | $65^{\prime}$ | $176{ }^{\prime}$ | 476' | 1,292' | 3,501' | 1.8 m | 4.9 m | 13 | 36 mi | 97 mi |
| 41 | $28^{\prime}$ | 77 | 209' | 567' | 1,536' | 4,164' | 2.1 m | 5.8 mi | 16 m | 43 mi | 115 mi |
| 42 | $34^{\prime}$ | 92' | 249 ' | 674 | 1,827' | 4,952' | 2.5 mi | 6.9 mi | 19 mi | 51 mi | 137 mi |
| 43 | $40^{\prime}$ | 109 | 296' | 801' | 2,172' | 1.1 mi | 3.0 m | 8.2 mi | 22 mi | 60 mi | 163 mi |
| 44 | 48 | $130{ }^{\prime}$ | 352' | $953 '$ | 2,583' | 1.3 m | 3.6 | 10 m | 26 | 72 mi | 94 mi |
| 45 | $57 '$ | 154' | 418' | 1,133' | 3,072' | 1.6 m | 4.3 | 12 m | 31 | 85 mi | mi |
| 46 | 68 | 183' | 4971 | 1,348' | 3,653' | 1.9 m | 5.1 | 14 | 37 | 101 mi | 75 mi |
| 4 | $80^{\prime}$ | $218{ }^{\prime}$ | 591' | 1,603' | 4,344' | 2.2 m | 6.0 m | 16 m | 44 | 120 mi | 327 mi |
| 48 | 96 | $259 '$ | $703 '$ | 1,906' | 1.0 mi | 2.7 m | 7.2 n | 19 mi | 53 | 143 mi | 388 mi |
| 49 | 114 | $308{ }^{\prime}$ | 836' | 2,266' | 1.2 m | 3.2 mi | 8.6 m | 23 mi | 63 mi | 170 mi | 462 mi |
| 50 | 135' | $367{ }^{\prime}$ | $994{ }^{\prime}$ | 2,695' | 1.4 mi | 3.8 m | 10 mi | 28 m | 75 mi | 203 mi | 549 mi |
| 51 | $161{ }^{\prime}$ | 436' | 1,182' | 3,205' | 1.6 m | 4.5 | 12 | 33 | 89 m | 241 mi | 53 mi |
| 52 | 191' | 519' | 1,406' | 3,812' | 2.0 m | 5.3 m | 4 | 39 | 106 | 286 mi | 777 mi |
| 53 | $228{ }^{\prime}$ | 617 | 1,672' | 4,533' | 2.3 m | 6.3 n | 7 | 46 | 126 | 341 | 924 mi |
| 54 | 271' | 734 | 1,989' | 1.0 mi | 2.8 m | 7.5 m | 20 | 55 | 149 | 405 mi | 1,098 mi |
| 55 | $322{ }^{\prime}$ | 872' | 2,365' | 1.2 m | 3.3 m | 8.9 m | 24 | 66 m | 178 | 482 mi | 1,306 mi |
| 56 | 383' | 1,037' | 2,812' | 1.4 mi | 3.9 m | 11 mi | 29 | 78 mi | 211 mi | 573 mi | 1,553 mi |
| 57 | 455' | 1,234' | 3,344' | 1.7 m | 4.7 m | 13 | 34 | 93 m | 251 | 681 mi | $1,847 \mathrm{mi}$ |
| 58 | $541{ }^{\prime}$ | 1,467' | 3,977' | 2.0 m | 5.5 | 15 | 41 | 110 m | 299 | 810 mi | 2,196 mi |
| 59 | 644' | 1,745' | 4,730' | 2.4 | 6.6 | 18 | 48 | 131 | 355 | 964 | 2,612 mi |
| 60 | 765 | 2,075' | 1.1 | 2.9 m | 7.8 | 21 | 8 | 156 | 423 | 1,146 | 3,106 mi |
| 61 | 910' | 2,467' | 1.3 | 3.4 m | 9.3 m | 25 m | 68 m | 185 | 503 | 1,363 mi | 3,694 mi |
| 62 | 1,082' | 2,934' | 1.5 | 4.1 mi | 11 m | 30 m | 81 m | 221 m | 598 m | 1,621 mi | 4,393 mi |
| 63 | 1,287' | 3,489' | 1.8 | 4.9 mi | 13 m | 36 m | 97 m | 262 m | 711 m | 1,927 mi | 5,224 mi |
| 64 | 1,531' | 4,150' | 2.1 | 5.8 mi | 6 m | 2 | 115 | 312 m | 845 | 2,292 mi | 6,213 mi |
| 65 | 1,820' | 4,935' | 2.5 | 6.9 | 9 m | 50 m | 137 | 371 | 1,005 | 2,725 mi | 7,388 mi |
| 66 | 2,165' | 1.1 mi | 3.0 | 8.2 | 22 | 60 | 163 | 441 | 1,196 | 3,241 m | 8,786 mi |
| 67 | 2,574' | 1.3 m | 3.6 | 10 | 26 | 71 | 193 | 525 | 1,422 | 3,854 | 10,448 mi |
| 68 | 3,062' | 1.6 mi | 4.3 m | 12 m | 31 m | 85 m | 230 m | 624 | 1,691 m | 4,584 | $2,425 \mathrm{mi}$ |
| 69 | 3,641' | 1.9 mi | 5.1 mi | 14 m | 37 mi | 101 m | 274 | 742 | $2,011 \mathrm{mi}$ | 5,451 | 4,776 mi |
| 70 | 4,330' | 2.2 mi | 6.0 mi | 16 mi | 44 mi | 120 mi | 325 mi | 882 mi | 2,391 mi | 6,482 | 7,572 mi |
| 71 | 1.0 mi | 2.6 mi | 7.2 mi | 19 mi | 53 mi | 143 mi | 387 mi | 1,049 mi | 2,844 mi | 7,709 | 20,896 mi |
| 72 | 1.2 mi | 3.1 mi | 8.5 mi | 23 mi | 63 mi | 170 mi | 460 mi | 1,247 mi | $3,382 \mathrm{mi}$ | 9,167 | $24,850 \mathrm{mi}$ |
| 73 | 1.4 mi | 3.7 mi | 10 m | 27 mi | 74 m | 202 mi | 547 m | 1,484 mi | $4,022 \mathrm{mi}$ | 10,902 | 29,552 mi |
| 74 | 1.6 mi | 4.4 mi | 12 mi | 33 mi | 89 mi | 240 mi | 651 mi | 1,764 mi | $4,782 \mathrm{mi}$ | 12,964 | $35,144 \mathrm{mi}$ |
| 75 | 2.0 mi | 5.3 mi | 14 mi | 39 mi | 105 mi | 286 mi | 774 mi | 2,098 mi | $5,687 \mathrm{mi}$ | 15,417 | $41,793 \mathrm{mi}$ |
| 76 | 2.3 mi | 6.3 mi | 17 mi | 46 mi | 125 mi | 340 mi | 920 mi | 2,495 mi | 6,763 mi | 18,334 | 49,700 mi |
| 77 | 2.8 mi | 7.5 mi | 20 mi | 55 mi | 149 mi | 404 mi | 1,095 mi | 2,967 mi | 8,043 mi | 21,803 | 59,104 mi |

## Perception

Tim Doty

## Perception

Tim Doty

## POi80ח

The preparation of poison is more art than science. There is enormous variability in the potency of the raw components with so many and varied controlling factors that it might as well be random. The provided poison behavior is really meant to be illustrative and game oriented rather than definitive: reaction to poison depends greatly on species and individual sensitivity.

There are three basic parameters for all poisons: method of delivery, mechanism of effect, and speed. The effect of the poison is also detailed, as well as the source. For each extra dose the effective potency is increased by one, but not more than double the base potency. For example, if a full ounce of snake venom is administered then potency is only 2 , not 10 . And even if you inject a huge amount of it into an elephant there will be no substantial effect. If a fractional dosage is used its potency is the same fraction of its base potency.

There are eight poison speeds: instant, lightning, very fast, fast, normal, slow, very slow and ponderous. The first three are strictly imaginary, no real poison acts that fast. An instant poison takes effect the same SR as it is applied, regardless of the victim's size excepting only gargantuan in which case it takes effect in the following SR.

Generically, the potency of the poison is compared to the victim's HP after the time delay indicated by the poison's speed and the victim's size. The level of success determines the level of effect (LOE) the poison has.

Damage from a particular infliction of poison counts as a single wound and is healed normally by the body. Magic healing that does not specifically cure injury due to poison will heal damage already done by the poison, but will not slow or stop an active poison.

A poison is considered to have "run its course" when a lethal effect would have, but failed to, occur. In the lack of any fatal conditions the termination of the most serious condition is the indicated term.

## Poison Description

There are six basic properities of a poison: source, form, dose, potency, method and delay.
Source is where the poison comes from. This may be generic (plant or mineral) or specific (adder).
Form is liquid, paste, powder, etc. and describes in what form the poison is found.
Dose is the weight of a single dose of the poison. One dose has the listed effect.
Potency is the expected potency of a single dose of the poison.
Method is the means by which the poison is delivered.

| Poison Speed |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size | Lightning | Very Fast | Fast | Normal | Slow | Very Slow | Ponderous |
| Extremely Tiny | 1 SR | 1 SR | 1 round | 1 minute | 12 minutes | 2 hours | 20 hours |
| Very Tiny | 1 SR | 2 SR | 2 rounds | 2 minutes | 18 minutes | 3 hours | $111 / 4$ days |
| Tiny | 1 SR | 3 SR | 3 rounds | $21 / 2$ minutes | 25 minutes | 4 hours | $13 / 4$ days |
| Very Small | 1 SR | 4 SR | 4 rounds | $31 / 2$ minutes | 35 minutes | 6 hours | 21⁄2 days |
| Small | 1 SR | 5 SR | 5 rounds | 5 minutes | 50 minutes | 8 hours | 3112 days |
| Medium Small | 1 SR | 7 SR | 7 rounds | 7 minutes | 70 minutes | 12 hours | 5 days |
| Medium | 1 SR | 1 round | 1 minute | 10 minutes | $11 / 2$ hours | 16 hours | 1 week |
| Medium Large | 1 SR | 1 round | $11 / 2$ minutes | 15 minutes | 2 hours | 1 day | $11 / 2$ weeks |
| Large | 2 SR | 2 rounds | 2 minutes | 20 minutes | 3 hours | $11 / 2$ days | 2 weeks |
| Very Large | 3 SR | 3 rounds | 3 minutes | 30 minutes | 5 hours | 2 days | 3 weeks |
| Huge | 4 SR | 4 rounds | 4 minutes | 40 minutes | 7 hours | 3 days | 4 weeks |
| Enormous | 6 SR | 6 rounds | 6 minutes | 1 hour | 9 hours | 4 days | 6 weeks |
| Titanic | 8 SR | 8 rounds | 8 minutes | $11 / 2$ hours | 13 hours | 6 days | 8 weeks |
| Gargantuan | 1 round | 1 minute | 10 minutes | 2 hours | 19 hours | 8 days | 11 weeks |

Delay is the time (Instant to Ponderous) from application to when the effects are first felt.

A poison will then have one or more symptom listings, each of which has four entries: condition, effect, time and recovery.
Condition is the requirement for the symptom to be felt and is generally expressed as a minimum Level of Effect.

Effect is what the symptom means in game terms.
Time is the time unit for the symptom. Generally the effect is applied every time unit.
Recovery is where the rules for recovering from the effect are given.

## Poison List

## Adder Venom

Source: adder
Form: liquid
Dose: 0.1 oz .
Potency: 1d10
Method: injection (blood poison)
Delay: Slow
Nausea \& Drowsiness
Condition: LOE $\geq 0$ (miss)
Effect: cumulative - 1 penalty to all actions each time increment for LOE +1 times
Time: Normal
Recovery: CON/POT every hour after last damage accumulated, level of success is number of -1 penalty increments recovered
Swelling \& Bruising
Condition: LOE $\geq 0$ (miss)
Effect: 1 point of damage each time increment $L O E+1$ times
Time: Very Slow
Recovery: normal healing rules
Adder venom causes the victim to feel drowsy and nauseous and although only lethal to small animals can cause localized swelling and bruising even in large, healthy animals.

Once the poison starts to take effect the victim becomes drowsy and nauseous to such an extent that his chance of success in any endeavor is penalized by -1 . This penalty is increased by -1 each additional time increment for level of success times. Thus a special success against a small animal would result in a penalty of -3 to all actions after 15 minutes. Once the poison has run its course for
this symptom the character rolls CON/POT every hour with each level of success reducing the penalty by 1 .

The poison also does level of success plus 1 as damage to the struck location. To continue the example, the poison would cause one point of damage after 3 hours, a second at 6 hours and the third point of damage at 8 hours.

## Basilisk Poison

Source: basilisk
Form: gas
Dose: 0.1 oz .
Potency: 3d20
Method: skin contact
Delay: Instant

## Choking

Condition: $L O E \geq 0$ (miss)
Effect: difficulty breathing increases the fatigue cost of any action by LOE. Even taking no action causes LOE FP to be accrued each minute. No FP can be recovered.
Time: Normal
Recovery: FP are recovered normally after this effect has worn off

## Tremors

Condition: $L O E \geq 0$ (miss)
Effect: muscular trembling increases the difficulty of any action involving physical activity-to include casting a spell that requires any gestures-by LOE $^{2}$
Time: Normal
Recovery: the tremors disappear abruptly with the termination of the effect

## Systemic Failure

Condition: LOE $\geq 1$ (success)
Effect: LOE adjSTR points of damage each time increment, LOE times
Time: Very Fast
Recovery: normal healing rules
Basilisk poison causes choking and tremors and can cause death very quickly, but its symptoms also fade rather quickly as well. In fact the poison is so transient that it is difficult to capture though poisoners have tried with various levels of success for centuries.

Once a victim has been exposed to the poison choking and tremors are immediate. The damage caused by systemic failure is somewhat more gradual and, unlike the choking and tremors, is permanent other than normal healing.

## Bonnacon Vapors

Source: bonnacon
Form: gaseous
Dose: 10 cubic inches
Potency: 4d10
Method: inhalation
Delay: instant

## Nausea

Condition: $L O E \geq 0$ (miss)
Effect: cumulative LOE penalty to all actions each time increment for $L O E+1$ times
Time: Fast
Recovery: CON penalty eliminated every hour

## Vomit

Condition: $L O E \geq 1$ (success)
Effect: spend LOE rounds vomiting (no other action allowed); take LOE damage and twice LOE fatigue at the end of each round
Time: as above
Recovery: normal healing and fatigue recovery
The bonnacon vapors are generated internally by the creature as a natural process. When evacuated most bonnacons provide sufficient volume of vapors to envelope twelve hexes, amounting to about a cubic foot before dispersal. There is a $10 \%$ chance that the vapors will spontaneously combust on contact with air burning with a fire intensity equal to potency. The vapors or the flame lasts for one minute.

The vapors are so thick and heavy that they are not easily dispersed by wind, the minute duration is simply the length of time before exposure to air and light depletes the noxious potency. When burning the vapors are consumed and as a fuel only last for one minute.

Collection of bonnacon vapors is difficult, but not impossible. They must be prevented from contacting air or being exposed to light. Under such conditions the potency can be retained almost indefinitely. If kept at internal body temperatures it will only lose 1 POT every thousand years. If kept at room temperature it will lose 1 POT every ten years.

## Catoblepas

Source: catoblepas
Form: gas
Dose: 1 oz.
Potency: 4d10
Method: contact
Delay: Instant

## Nausea

Condition: $L O E \geq 0$ (miss)
Effect: penalty of LOE to all actions, use highest LOE of all current exposures
Time: -
Recovery: LOE reduced by CON every minute after exposure ends

## Caustic

Condition: $L O E \geq 1$ (normal)
Effect: does LOE damage LOE times
Time: Fast
Recovery: normal healing rules
The miasma emitted by a catoblepas stinks terribly, but despite its potency on emission decays at such a quick rate that it is difficult to utilize separate from the beast itself. Never-the-less some success has been obtained in the way of artificial production by means of decomposing the various plants ingested by the catoblepas using substances found in the mouth and stomach of the catoblepas and the techniques of plant alchemy.

Such artificial poison is also of only temporary potency, but can be rigged in such a fashion as to be produced continuously for extended periods of time. For those plant alchemists who get into that sort of thing it is popular as a trap for the unwary placed in or near the laboratory.

## Cave Snake Venom

Source: cave snake
Form: liquid
Dose: 0.1 oz .
Potency: 1
Method: injection (blood poison)
Delay: Instant
Flesh Decay
Condition: any LOE
Effect: 1d4-1 damage
Time: Very Fast
Recovery: normal healing
The venom of the cave snake is unusual in that it affects the victim regardless of size or constitution until it is spent. More doses don't increase the potency, they extend how long it works. A larger
size does not decrease the damage taken, it just delays it. Each dose has one round of effect so a king cave snake delivering $33 / 4$ pounds of venom per bite would do $1 \mathrm{~d} 4-1$ damage each round for an hour.

## Centipede Venom

Source: centipede
Form: liquid
Dose: 0.1 oz .
Potency: 1d6
Method: injection (blood poison)
Delay: Very Fast
Sting
Condition: $L O E \geq 0$ (miss)
Effect: pain causing penalty of $(L O E+1)^{2}$ to all actions Time: -
Recovery: LOE reduced by CON $\div 10$ every hour

## Rot

Condition: LOE (normal)
Effect: tisue rots for one point of damage LOE times Time: Slow
Recovery: normal healing rules
The venom is more painful than lethal, though it can lead to death in extreme situations for smaller animals-or if sufficient potency is found, as with the giant centipede.

## Chlorine

Source: poison drake
Form: gas
Dose: 10 cubic inches
Potency: 3d6
Method: inhalation
Delay: Very Fast

## Coughing

Condition: $L O E \geq-1$ (failure)
Effect: $(L O E+2)^{2}$ penalty to all actions due to distraction and muscular spasms from the coughing; unable to recover fatigue
Time: Fast
Recovery: once the time since last exposure has expired reduce the penalty by CON every ten minutes

## Difficulty Breathing

Condition: $L O E \geq 1$ (success)
Effect: incur LOE additional FP each round of activity
Time: Normal
Recovery: once the time since last exposure has expired the additional FP cost is reduced by CON every hour

## Vomiting

Condition: $L O E \geq 1$ (success)
Effect: no action other than vomiting for LOE rounds, take LOE fatigue at the end of each round

Time: as above
Recovery: normal fatigue recovery after last exposure

## Burning Pain and Nausea

Condition: $L O E \geq 0$ (miss)
Effect: nausea and pain on any exposed part, but especially in the eyes, nose and throat causes cumulative penalty of -1 LOE +1 times
Time: Very Fast
Recovery: reduce penalty by CON every hour after last exposure

Asphyxiation and Fluid in Lungs
Condition: $L O E \geq 1$ (success)
Effect: at LOE 1 take 1 point of damage generally; at LOE 2 take a serious wound level damage to the chest; at LOE 3+ take HP damage to the chest; damage is at the rate of one point per time unit; any chest damage result indicates coughing up blood
Time: Slow
Recovery: damage taken to the chest cannot be healed naturally

Chlorine gas is a pale green or yellowish green gas having an odor some where between pepper and pineapples. It can be manufactured by alchemists or generated from a poison drake. Neither method is without substantial risk. As the gas is heavier than air it tends to sink and collect in low places, such as the lower parts of a poison drake's lair.

Exposure to chlorine gas causes coughing and tightness of the chest. It is usually followed by a burning sensation in the eyes, nose and throat. Burning eyes leads to watering and blurred vision. Exposed skin will redden and burn with pain, or even develop blisters. Nausea and vomiting occur with sufficient exposure. Death, when it occurs, is caused by a build up of fluid in the lungs.

## Curare

Source: plant
Form: bitter paste or syrup
Dose: 1 oz.
Potency: 1d10+15
Method: injection (blood poison)
Delay:Normal

## Paralysis

Condition: LOE $\geq-2$ (fumble)
Effect: limit Score for physical actions to (14-7×LOE)
Time: Normal
Recovery: CON/POT every 30 minutes (raise limit by 1 per level of success, all stiffness gone when limit raised to 31)

## Death

Condition: paralysis $\leq 0$
Effect: SWL damage to head plus SWL general damage
Time: per minute after paralysis
Recovery: normal healing rules
Curare paralyzes the victim causing death through lack of oxygen if the dose is sufficient. Thus the victim is conscious, but unable to speak or move, while dying. Because the poison only works through the blood it is safe to ingest (the digestive system breaks it down). The paralysis effect lasts longer on larger creatures because it takes them longer to completely remove the poison from their system.

## Dragon Venom

Source: dragon
Form: liquid
Dose: 4 oz .
Potency: 2d10+10
Method: injection (blood poison)
Delay: Very Fast

## Pain and Trembling

Condition: $L O E \geq-1$ (failure)
Effect: -1 DEX or any action for one minute at LOE -1 ;
$-1 d 6$ DEX or any action for ten minutes at LOE 0;
$-2 d 6$ DEX or any action for thirty minutes at LOE 1;
$-2 d 6$ DEX or any action for an hour at LOE 2+
Time: Very Fast
Recovery: as above

## Internal Organ Swelling

Condition: $L O E \geq 0$ (miss)
Effect: 1d6 damage LOE times, not less than one point of damage
Time: Very Fast
Recovery: normal healing rules

## Systemic Failure

Condition: $L O E \geq 3$ (critical)
Effect: death
Time: Very Fast
Recovery: none other resurrection or equivalent magic
Dragon venom is prized for its powerful effect. Unfortunately it can only be retrieved from a living or freshly slain dragon which makes it a rare commodity. Further it loses potency at the rate of one
point per minute while exposed to air or light. Hermetically sealed it can be stored indefinitely.

A dragon's venom sac typically holds five pounds of venom. The venom itself is liquid, but has the consistency of syrup. If applied to a blade it is unlikely to get complete utility: each level of success transfers one-eighth the total potency. So if potency is 21 a special success will deliver 5 POT.

## Generic Poison

Source: various
Form: liquid (usually)
Doze: 1 oz. (varies)
Potency: 1d20
Method: ingestion (usually), injection (commonly), skin contact (infrequently), inhalation (rarely)
Delay: Normal

## Difficulty Breathing

Condition: $L O E \geq 0$ (miss)
Effect: incur LOE additional FP when exerting any FP
Time: Slow
Recovery: fatigue are recovered normally

## Hives and Itching

Condition: $L O E \geq 0$ (miss)
Effect: incur distraction penalty equal to $L O E^{2}$ due to general or localized itching. At LOE 1 this is visible as redness of the skin, at LOE $2+$ there are hives.
Time: Slow
Recovery: each time increment reduce LOE by one

## Confusion

Condition: $L O E \geq 1$ (normal)
Effect: difficulty thinking incurs penalty to any action of LOE
Time: Slow
Recovery: penalty disappears with condition

```
Anaphylactic Shock
    Condition: LOE \geq3 (critical)
    Effect: cardiovascular difficulty and even failure to such
        an extent that SWL damage are taken over a time
        increment of Slow, less one column per LOE greater
        than 3 for the duration of this effect
    Time: Slow
    Recovery: normal healing rules
```

This entry is for all references generically to "poison." Such substances are poisonous because they cause an anaphylactic reaction in the victim which, if potent enough, can cause death. LOE 4 or greater (double critical or better) is generally sufficient for death.

Another factor common with such poisons is that repeated exposure causes worse reactions. This

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is represented in game terms by increasing the effective potency by the number of previous distinct poisonings.

For example, if a character is stung by twenty bees then their potencies are added together. If the next day he is stung by a single bee its potency is increased by one.

## Hemlock

## Source: plant

Form: bitter tea
Dose: 8 oz.
Potency: 1d10+20
Method: ingestion
Delay: Normal

## Cramps

Condition: $L O E \geq 0$ (miss)
Effect: disabling (no normal action allowed) if $L O E \geq 1$
Time: Normal
Recovery: after poison runs its course

## Death

Condition: $L O E \geq 2$ (special)
Effect: death
Time: Slow (divided by LOE)
Recovery: none
Hemlock is primarily used as a suicide draught: it is very lethal, but when sufficiently concentrated to be effective it has an undisguisable strong, bitter taste.

The cramps are strong by normal poison speed time increment and runs its course in the slow poison speed time increment. The time to death is divided by the level of success. For example, a critical success against a large creature results in death one hour after infliction.

## Magic

Source: spell
Form: spell
Dose: spell
Potency: SL
Method: magic
Delay: Normal

## Internal Bleeding

Condition: $L O E \geq 0$ (miss)
Effect: LOE (interpret LOE 0 as ½) levels of bleeding Time: Normal
Recovery: normal HP recovery after poison runs its course

This entry describes the default characteristics of a generic poison produced by magic. Such a poison may have somewhat different attributes depending
on the spell creating it. For example, the various times may be different than listed.

## Phosgene

Source: poison drake
Form: gas
Dose: 5 cubic inches
Potency: 3d10
Method: inhalation
Delay: Very Fast

## Symptoms

see chlorine
Phosgene is a clear gas though it may appear white or yellowish in sunlight due to diffraction. It has a subtle odor rather like freshly cut grass. Though it can be obtained either through alchemy or a captured poison drake, both methods bear their own risks.

The effects of phosgene are very similar to chlorine gas the main difference being that phosgene is more potent. Given the lack of warning signs phosgene also carries a greater risk of unknowing exposure.

## Snake Venom

Source: poisonous snake
Form: liquid
Dose: 0.1 oz.
Potency: 1
Method: injection (blood poison)
Delay:Fast

## Swelling \& Bruising

Condition: $L O E \geq 1$ (success)
Effect: damage equal to LOE
Time: Fast
Snake venom...

## Scorpion Venom

Source: scorpion
Form: liquid
Dose: 0.1 oz.
Potency: 1d20
Method: injection (blood poison)
Delay: Very Fast
Irregular Heartbeat
Condition: $L O E \geq-1$ (failure)
Effect: heart beats erratically causing dizziness (cumulative penalty increases by 1 each time increment)
Time: Very Fast
Recovery: after poison runs its course penalty decreases by 1 each time increment

## Difficulty Breathing

Condition: $L O E \geq 1$ (success)
Effect: disabling due to lack of breath to act (can still do purely mental activity)
Time: Fast
Recovery: after poison runs its course

## Death

Condition: $L O E \geq 2$ (special)
Effect: death
Time: Slow, time divided by LOE
Recovery: none
Scorpion venom causes the heart to beat erratically and suppresses breathing. Breathing will gradually become more difficult until it completely stops. Thus the victim is conscious until the moment of death. In non-lethal applications the poison is considered to have run its course when the death condition fails to apply.

## Tunnel Spider Venom

Source: tunnel spider
Form: liquid
Dose: 0.1 oz .
Potency: 1d10
Method: injection (blood poison)
Delay: Fast
Tingling \& Twitching
Condition: LOE $\geq-1$ (failure)
Effect: tingling around lips and twitching of the tongue
Time: Fast
Recovery: after poison runs its course

## Weeping \& Sweating

Condition: $L O E \geq 0$ (miss)
Effect: weeping, profuse salivation, sweating and muscle spasms-penalty to physical actions of LOE
Time: Normal
Recovery: after poison runs its course

## Lungs fill with fluids

Condition: LOE $\geq-1$ (failure)
Effect: $(L O E+2) \div 4 \times H P$ damage in lungs (chest)
Time: Slow
Recovery: damage cannot be healed until lungs are drained of fluid
The initial symptoms are tingling around the lips and twitching of the tongue followed by tearing, profuse salivation, sweating and muscle spasms. Blood pressure and heart rate will rise as the lungs fill with fluids, causing death.

| Scorpion Venom |  |  |
| :--- | :---: | :---: |
| Size | LOE | Dizziness |
| Failure | -1 | 1 |
| Miss | 0 | 3 |
| Normal | 1 | 6 |
| Special | 2 | 10 |
| Critical | 3 | 15 |
| Critical $^{2}$ | 4 | 21 |
| Critical $^{3}$ | 5 | 28 |
| Critical $^{4}$ | 6 | 36 |

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## Travelitg

Whether the distance is great or small, the following is a guide for traveling adventurers. A brief overview of each mode of travel is given first to facilitate ease of play with a more indepth discussion after.
Especially in the case of sailing there is a large amount of terminology that can be used to add flavor.

## Riding

A four-legged mount is encumbered by carrying or pulling a load. In practical consideration there is a limit to how much weight can be carried; as a rule of thumb this is "lightly encumbered" but for short periods a mount can carry up to "encumbered" level (doing so requires CON/10 checks every minute, every round if moving more than a walk and every round with a difficulty of 20 if moving sprinting). Attempts to load a mount to "heavily encumbered" will injure it. Such weights can only safely be pulled.

| Level | Weight | Mv | Enc |
| :--- | :--- | :---: | :---: |
| Unencumbered | STR $^{2} \times 1 / 8$ | $\times 1$ | 1 |
| Lightly Enc | STR $^{2} \times 1 / 4$ | $\times 7 / 8$ | 2 |
| Encumbered | STR $^{2} \times 1 / 2$ | $\times 3 / 4$ | 3 |
| Heavily Enc. | STR $^{2}$ | $\times 1 / 2$ | 5 |
| Extremely Enc. | STR $^{2} \times 2$ | $\times 1 / 4$ | 10 |

## By Land

Travel in games is usually by land. This may be because the cost of entry is so low, but is also likely the result of a modern prejudice where travel by land is commonplace. It should be remembered that most travel is by water with land routes reserved for the otherwise inaccessible.

When traveling by land there are three choices for means: by foot, by horse or by vehicle. In general, the quickest over distance is by foot, the quickest over short distances is by horse (or other mount) and the most comfortable, though slowest, is by vehicle. Keep in mind that the fastest a group can travel is at the rate of the slowest member.

## By Foot

When traveling by foot the character incurs fatigue depending on their encumberance and the rate of travel being attempted. When traveling at a walk a character can manage one-quarter his movement rate as miles per hour incuring Enc FP every half hour. Going at a trot he can manage one-half his move-
ment rate as miles per hour incuring Enc FP every five minutes. At a run he can manage

his movement rate as miles per hour and incurs Enc FP every minute. Note that the time interval is multiplied by the character's Run skill level.

| Terrain and Movement |  |  |  |  |
| :--- | :--- | :--- | :---: | :--- |
| Cerrain | Condition | Foot | Horseback | Vehicle |
| paved Road | Dry | $\times 1.00$ | $\times 1.00$ | $\times 1.00$ |
|  | Rain | $\times 0.90$ | $\times 0.80$ | $\times 0.80$ |
|  | Storm | $\times 0.67$ | $\times 0.50$ | $\times 0.50$ |
| Dirt Road | Dry | $\times 0.90$ | $\times 0.90$ | $\times 0.75$ |
| or open field | Muddy | $\times 0.67$ | $\times 0.50$ | $\times 0.50$ |
|  | Storm | $\times 0.50$ | $\times 0.25$ | $\times 0.25$ |
| Hilly | Dry | $\times 0.67$ | $\times 0.50$ | $\times 0.25$ |
|  | Muddy | $\times 0.33$ | $\times 0.25$ | $\times 0.20$ |
|  | Storm | $\times 0.20$ | $\times 0.15$ | $\times 0.10$ |
| Swamp | "Dry" | $\times 0.25$ | $\times 0.10$ | - |
|  | "Wet" | $\times 0.10$ | - | - |


| Distance Per Day, Flat Dry Roads |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mode | Gait | Rate | Time | $L F P^{*}$ | Distance |
| Foot $\dagger$ | Walk | 2 mph | 12 hours | 5 | 24 miles |
|  | Trot | 4 mph | 5 hours | 12 | 20 miles |
|  | Run | 8 mph | 1 hour | 12 | 8 miles |
| Horseback | Walk | $21 / 2 \mathrm{mph}$ | 10 hours | 3 | 20 miles |
|  | Trot | 6 mph | 10 hours | 5 | 50 miles |
|  | Canter | 9 mph | 10 hours | 8 | 75 miles |
|  | Gallop | 15 mph | 10 hours | 13 | 125 miles |
| Carriage | Walk | $21 / 2 \mathrm{mph}$ | 10 hours | (3) | 25 miles |
|  | Trot | 6 mph | 10 hours | (5) | 60 miles |
|  | Canter | 9 mph | 10 hours | (8) | 90 miles |
| Cart | Walk | 2 mph | 10 hours | (5) | 20 miles |
|  | Trot | 5 mph | 8 hours | (12) | 40 miles |
| Wagon | Walk | 2 mph | 8 hours | (12) | 16 miles |
| Ox Wain | Walk | 1 mph | 10 hours | (12) | 10 miles |
| $\dagger$ multiply distance and time by Run skill level for same LFP |  |  |  |  |  |
|  |  |  |  |  |  |

One advantage to traveling by foot is that it does well cross country with little loss in movement rate. The main difficulty is traveling surface distance rather than map distance: for hilly terrain increase the distance by $50 \%$. Some types of terrain do affect movement rate as indicated in the Terrain and Movement table.

## By Horse

This includes not just the horse, but any other land animal that can be ridden, though the discussion pertains especially to horses. To get the most out of a horse it should be rested ten minutes of every hour of travel. The given movement rates assume a light carriage or a light (less than 180 pounds including gear) rider and a very physically fit horse. Even so, attempting to sustain the given movement rate over multiple days will wear the horse to the bone. After half its CON days of this kind of use the horse will lose a point of CON and a point of END every five hours. Half of this loss is permanent.

The constant bouncing and jouncing of riding a horse is fatiguing: the fatigue listed in the table is for both the mount and the rider. A skilled rider tires less easily: it takes a number of fatigue points equal to the rider's Ride Horse skill to incur an actual fatigue point.

## By Sea

With the exception of a few aquatic races, travel by sea requires the use of some means of conveyance. The vessel used and the weather conditions dictate how much progress can be made. However, unless sailing within sight of coast there are no landmarks which makes it difficult to ascertain position. There are some methods and tools to help, but for the most part being at sea means being lost.

## Vessels

There are three primary types of transportation at sea: drifting, rowing and sailing. Someone clinging to driftwood is drifting-this takes no skill, just lots of luck to get where you want to go. In such a case travel is entirely at the whim of the weather.

The Boat skill is used to crew and pilot a rowing vessel whether the vessel is being paddled by hand, with paddles or with oars (though the last requires the most skill to be effective). Boat skill is also used for poling a raft or punt.

The Sail skill is used to crew and pilot a sailing vessel regardless of the number or style of sails. However, a character will be less effective with vessels with whose type he is not familiar.

## Weather

There are four general weather conditions: calm, fair, contrary and stormy. Rowing vessels do best in calm or fair weather; other vessels only do well in fair weather. The precise meaning of the conditions depend on the environment-a small inland sea is unlikely to have storms of a size to be found on the open ocean.

A calm weather condition is anything up to light air ( 3 knots or less). A stormy condition is anything from a near gale on up ( 28 knots or more). Anything else is either fair or contrary, the difference being solely the wind's direction.

## Locales

Any body of water that can bear the vessel is a potential locale. This ranges from small to large rivers, ponds to lakes to inland seas, seas to oceans. In general there are rivers, lakes, seas and oceans.

Weather does not normally have much effect on a river unless the river is running down the middle of a broad, flat plain or near the river mouth.

Otherwise the terrain and vegetation have a strong mediating effect on wind and the river lacks sufficient water depth to develop
significant waves. On a particular river, especially a large one, there may be prevailing winds that affect travel but these are handled on a case-by-case basis. Note that weather will often follow a river. This can be dangerous, especially near river mouths as storm systems that have built up on large bodies of water can travel some distance up river before depleting their resources.

A lake will only be minorly impacted by weather. Winds can build to moderate speed, but lack the space and water depth to build into truly threatening storms. Consequently seas are normally light.

A sea has enough expanse to allow high winds to build up and enough depth for real storms to develop. Seas are normally light, but will get heavy with high winds.

## Storm

Each sailing round ( 1 minute? 10 minutes) the storm level is matched against the ship's quality ( 5 for a miss, 10 for a normal, 16 for a special, 25 for a critical, etc., in shipwright skill). Level of success is structure damage (likewise to hull points). If it does structure damage to the vessel then it starts to break up. The larger the ship the longer it takes to break up.

An ocean has sufficient expanse and depth to allow numerous storms to build up independently and to last until they drive into shore. This is dangerous territory as weather from the deep sea will blow right up to the coast.

## Voyage

A voyage is an involved proposition and how to resolve it is entirely up to the referee. The following system is quick, but allows in a general way for some of the complexities that can arise. It works best for sea and ocean voyages.

First, calculate the number of days the voyage should take. Find the distance to the destination and divide by the distance per day of fair weather as given for the vessel. Note the sailing distance per day is for 24 hours. This should be halved for day dailing. Rowing assumes a 12 hour rowing day ( 16 hours for the maximum distance). The result, rounded up, is the number of days the voyage is expected to take.

Second, starting with the first day of the voyage, roll each day for the weather. This gives, in general terms, what the weather was like for that day.

Third, follow the instructions for the weather to determine the amount of progress. Any attempt to make progress requires a Navigation roll. Travel is in progress with a success, otherwise it is in error. It also requires the ship's first mate to make a roll against either Boat or Sail, as appropriate, with the results interpreted as follows:

| Success | Result |
| :--- | :--- |
| Critical $^{3}$ | +2 day's travel |
| Critical $^{2}$ | $+11 / 2$ day's travel |
| Critical | +1 day's travel |
| Special | $+1 / 2$ day's travel |
| Normal | Travel base distance |
| Miss | - |
| Failure | Travel base distance in error, regardless <br> of the navigation results. |
| Fumble | Check for Ship Capsize against a 5 and <br> Man Overboard |
| Fumble ${ }^{2}$ | Check for Ship Capsize against a 10 and <br> Man Overboard with Slightly Hard. |
| Fumble $^{3}$ | Check for Ship Capsize against a 20 and <br> Man Overboard with Moderately Hard. |
|  |  |

Ship Capsize

Each vessel has a stability rating. This is matched against the indicated score on the resistance table to find the chance of avoiding capsizing. On a miss the ship takes in more water than can be pumped or bailed and begins to sink. It takes 12 minutes per ton for a ship to sink. On a failure the ship is listing severely-this causes crew and cargo to slide around, possibly injuring them. It takes 9 minutes per ton for the ship to sink. On a fumble the ship is turned on its side-this throws crew and cargo around, probably injuring them. It takes 6 minutes per ton for the ship to sink.

## Man Overboard

Each person on board must make a Boat skill roll (Sail can be substituted on a sailing vessel) to avoid being thrown overboard. On a miss the character is overboard, but close enough to throw a line to.

## Landfall

In addition to the number of days progress, the referee keeps track of the number of days traveled in error. When the number of days of progress reach the number of days expected plus the number of days in error the destination is reached.

Unexpected landfall is rolled for each day. The chance of landfall depends on the total number of days traveled since the last landfall and the scarcity of land in the region. The Landfall table provides some guidelines. The referee alone determines where the landfall is, although it is reasonable that it should not be farther than the sum of days of progress and days in error from the port of origin.

Region
Open Ocean

Chance
$1 \% \times$ days of travel

| Weather Condition |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Condition | Summer | Fall | Winter | Spring |
| Becalmed | $01-05$ | $01-03$ | $01-05$ | $01-03$ |
| Fair | $06-10$ | $04-09$ | $06-10$ | $04-10$ |
| Good | $11-30$ | $10-21$ | $11-30$ | $11-23$ |
| Excellent | $31-40$ | $22-27$ | $31-40$ | $24-30$ |
| Contrary | $41-55$ | $28-37$ | $41-55$ | $31-40$ |
| Headwinds | $56-65$ | $38-43$ | $56-65$ | $41-47$ |
| Difficult | $66-80$ | $44-50$ | $66-80$ | $48-55$ |
| Gale | $81-95$ | $51-90$ | $81-95$ | $56-85$ |
| Storm | $96-99$ | $91-98$ | $96-00$ | $86-00$ |
| Hurricane | 100 | 99,100 | - | - |


| Type/Vessel | Rigging | Crew | Size | Cargo | knots | Row <br> AGI | $\begin{gathered} \text { n. mile } \\ \text { per Day } \end{gathered}$ | knots | $\begin{aligned} & \text { Sail } \\ & \text { AGI } \end{aligned}$ | $\begin{gathered} \text { n. mile } \\ \text { per Day } \end{gathered}$ | Stability | Hull Points / Structure |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Improvised |  |  |  |  |  |  |  |  |  |  |  |  |
| Dugout Canoe | - | 1 | 0.38 tons | 280 lbs. | $13 / 4$ | 1 | 16 (27) | - | - | - | 7 | $17 / 4$ (17) |
| Raft | - | 1 | 1.3 tons | 0.75 tons | $13 / 8$ | 2 | 14 (22) | - | - | - | 52 | 42 / 4 (15) |
| Boat |  |  |  |  |  |  |  |  |  |  |  |  |
| Canoe | - | 1 | 420 lbs. | 120 lbs . | 17/8 | 3 | 17 (31) | - | - | - | 8 | $1 / 1$ (1) |
| Johnboat | - | 1 | 392 lbs. | 40 lbs . | 2 | 3 | 17 (31) | - | - | - | 19 | $3 / 3$ (3) |
| Long Canoe | - | 2 | 0.28 tons | 40 lbs . | $21 / 2$ | 3 | 19 (41) | - | - | - | 10 | $2 / 2$ (2) |
| Punt | - | 1 | 0.25 tons | 200 lbs. | 17/8 | 2 | 16 (29) | - | - | - | 23 | $3 / 3$ (3) |
| Riverboat | Lateen | 7 | 10.9 tons | 8.13 tons | 23/8 | 5 | 19 (38) | $3 / 8 / 1 / 13 / 4$ | 7 | 24 (161) | 8 | $181 / 4$ (10) |
| Sea Elf Ketch | Ketch | 42 | 25.2 tons | 8.63 tons | 23/4 | 3 | 20 (44) | $45 / 8 / 111 / 4 / 111 / 4$ | 23 | 269 (269) | 9 | 1216 / 8 (5) |
| Ship's Boat | - | 2 | 1.25 tons | 0.75 tons | 2 | 3 | 17 (31) | - | - | - | 12 | $25 / 4$ (15) |
| Tug | - | 25 | 8.04 tons | 3.48 tons | $41 / 2$ | 17 | 25 (71) | - | - | - | 19 | 145 / 4 (7) |
| Sailboat |  |  |  |  |  |  |  |  |  |  |  |  |
| Sailboat | Sloop | 3 | 13 tons | 4.63 tons | - | - | - | $3 / 4 / 2 / 3^{1 / 2}$ | 11 | 47 (196) | 79 | 781 / 4 (4) |
| Sea Elf Sloop | Sloop | 7 | 4.32 tons | 0.63 tons | 2 | 2 | 17 (32) | $21 / 8 / 53 / 8 / 81 / 2$ | 53 | 130 (203) | 34 | 291 / 8 (10) |
| Small Sailboat | Sloop | 2 | 2.11 tons | 0.41 tons | - | - | - | $5 / 8 / 15 / 8 / 3$ | 23 | 40 (144) | 33 | 142 / 4 (9) |
| Longship |  |  |  |  |  |  |  |  |  |  |  |  |
| Drakkar | Single | 36 | 43.1 tons | 21.5 tons | $41 / 4$ | 7 | 25 (68) | $11 / 4 / 31 / 8 / 51 / 2$ | 6 | 74 (294) | 39 | 1711 / 4 (6) |
| Longship | Single | 13 | 4.37 tons | 1.13 tons | 3/8 | 6 | 23 (57) | $3 / 4 / 2 / 35 / 8$ | 11 | 48 (182) | 17 | 163 / 4 (11) |
| Sea Elf Longship | Single | 69 | 14.4 tons | 0.38 tons | 7 | 18 | 32 (113) | $21 / 2 / 61 / 4 / 10^{5 / 8}$ | 20 | 150 (255) | 34 | 569 / 8 (12) |
| Snekkja | Single | 23 | 12 tons | 4.63 tons | $41 / 4$ | 7 | 25 (68) | $1 / 23 / 8 / 43 / 8$ | 8 | 58 (232) | 25 | 447 / 4 (9) |
| Galley |  |  |  |  |  |  |  |  |  |  |  |  |
| Bireme | Single | 108 | 48.3 tons | 8.5 tons | $71 / 2$ | 27 | 33 (120) | $1 / 23 / 8 / 43 / 8$ | 4 | 58 (279) | 26 | 3411 / 4 (4) |
| Knorr | Single | 25 | 220 tons | 174 tons | 25/8 | 5 | 19 (42) | $11 / 8 / 23 / 4 / 47 / 8$ | 2 | 65 (288) | 13 | 4142 / 4 (4) |
| Pentakonter | Single | 55 | 30.8 tons | 15.6 tons | $53 / 4$ | 17 | 29 (93) | $3 / 4 / 2 / 35 / 8$ | 4 | 48 (249) | 18 | 817 / 4 (7) |
| Trireme | Lateen | 187 | 84.4 tons | 6.63 tons | 87/8 | 32 | 36 (143) | $13 / 8 / 33 / 8 / 61 / 8$ | 9 | 82 (329) | 40 | 6675 / 4 (3) |
| Ship |  |  |  |  |  |  |  |  |  |  |  |  |
| Cargo Ship | Lateen | 11 | 74.8 tons | 35.6 tons | - | - | - | $3 / 4 / 2 / 35 / 8$ | 6 | 48 (269) | 103 | 4039 / 4 (2) |
| Cog | Single | 10 | 121 tons | 71.9 tons | - | - | - | $11 / 8 / 21 / 8 / 5^{1 / 4}$ | 3 | 70 (285) | 79 | 5041 / 4 (2) |
| Corsair | Sloop | 48 | 97 tons | 67.9 tons | $41 / 4$ | 13 | 25 (68) | $1 / 21 / 2 / 45 / 8$ | 5 | 61 (249) | 5 | 2298/4 (5) |
| Great Ship | Fully Rigged | 144 | 7776 tons | 3535 tons | - | - | - | $3 / 71 / 2 / 13^{3 / 8}$ | 1 | 179 (557) | 27 | 403130/4 (1) |
| Large Ship | Rully Rigged | 34 | 692 tons | 484 tons | - | - | - | $2 / 5^{1 / 8} / 9^{1 / 8}$ | 1 | 122 (352) | 15 | 20450 / 4 (2) |
| Sail Tug | Single | 23 | 8 tons | 2.23 tons | 4 | 14 | 24 (65) | $3 / 4 / 13 / 4 / 31 / 4$ | 7 | 43 (161) | 19 | 306 / 4 (7) |
| Ship | Fully Rigged | 23 | 205 tons | 135 tons | - | - | - | $15 / 8 / 41 / 8 / 71 / 2$ | 2 | 99 (288) | 12 | 6717 / 4 (4) |

## Snekkja

| Type: | Longship | Statistics |  |
| :--- | ---: | :--- | ---: |
| Hull: | Wood | Price: | $311 / 8 \mathrm{gp}$ |
| Lightship: | 4.53 tons | Lightship: | 4.53 tons |
| Deadweight: | 7.5 tons | Displacement: | 12 tons |
| Hull Coefficient: | 0.63 | Crew Space: | 2.88 tons |
| Decks: | 1 (covered bilge) | Cargo Capacity: | 4.63 tons |
| Length: | $56^{\prime}$ | Hull Coefficient: | 0.63 |
| Beam: | $8^{\prime}$ | Max hull speed: | 10 knots |
| Draft: | $1^{\prime} 6^{\prime \prime}$ | Rowing speed: | $41 / 4$ knots |
| Oars: | 20 | Rowing acceleration: | 1.86 knots per round |
| Men/oar: | 1 | Rowing maneuver: | 7 AGI |
| Rigging: | Single | Sailing speed: | 1 knots |
| Masts: | 1 | Sailing acceleration: | 0.5 knots per round |
| Sail Yardage: | 60 square yards | Sailing maneuver: | 8 AGI |
| Mast Height: | 32 feet | Max sail speed: | $95 / 8$ knots |
| Mast Diameter: | 0.75 feet | Hull Points: | 447 |
|  |  | Structure: | 4 |

Punt

| Type: | Boat | Statistics |  |
| :--- | ---: | :--- | ---: |
| Hull: | Wood | Price: | $47 / 8 \mathrm{sp}$ |
| Lightship: | 90 pounds | Lightship: | 90 pounds |
| Deadweight: | 480 pounds | Displacement: | 0.25 tons |
| Hull Coefficient: | 0.9 | Crew Space: | 280 pounds |
| Decks: | 0 (open hull) | Cargo Capacity: | 200 pounds |
| Length: | $12^{\prime}$ | Hull Coefficient: | 0.89 |
| Beam: | $2^{\prime} 6^{\prime \prime}$ | Max hull speed: | $45 / 8 \mathrm{knots}$ |
| Draft: | $4^{\prime \prime}$ | Rowing speed: | $17 / 8 \mathrm{knots}$ |
| Oars: | 1 | Rowing acceleration: | 5.44 knots per round |
| Men/oar: | 1 | Rowing maneuver: | 2 AGI |
|  |  | Hull Points: | 3 |
|  |  | Structure: | 4 |
|  |  | Stability: | 23 |

Ocean
Open Sea
Sea
Archipelago $25 \% \times$ days of travel

## Weather Condition

Every day 1 d 100 is rolled to determine the general weather conditions. For each result a base travel distance for sailing vessels (as opposed to rowing) is specified, as well as any modifiers to Navigation, Boat or Sail skills. The base distance for rowing is always a day's travel.
BECALMED There is no wind to speak of and nothing happens. Just a calm, boring day. The only way to make progress is to row.
FAIR There is a light or gentle breeze blowing somewhat in the desired direction. Base distance is half a day's travel.
GOOD There is a moderate breeze blowing somewhat in the desired direction. Base distance is one day's travel.

EXCELLENT There is a fresh or strong breeze blowing somewhat in the desired direction. Base distance is one and a half day's travel.
CONTRARY There is an unfavorable breeze.
Navigation becomes Moderately Hard and the first mate's roll is Slightly Hard. Base distance is half a day's travel. If not attempting to make progress must anchor or lose half a day's progress.

HEADWINDS There is a strong headwind. Navigation becomes Hard and the first mate's roll is Moderately Hard for lateen rigged ships and Hard for square rigged ships. Base distance is half a day's travel. If not attempting to make progress must anchor or lose a day's progress.
DIFFICULT The winds are constantly shifting speed and direction making setting courses and sails difficult. Navigation is Moderately Hard and, for sailing vessels, the first mate's roll becomes Moderately Hard as well.
GALE High winds threaten to capsize the ship. Navigation becomes Hard and the first mate's roll becomes Moderately Hard. Base distance is a day's travel. If not attempting to make prog-
ress must anchor to avoid half a day's travel in error. If no progress is attempted but the sails are not taken in make a capsize check against 5 .
STORM Storm winds threaten to swamp and capsize the ship. Navigation becomes Very Hard and the first mate's roll becomes Hard. Base distance is half a day's travel. If not attempting to make progress must anchor to avoid a day's travel in error. If no progress is attempted but the sails are not taken in make a capsize check against 10.
HURRICANE Hurricane winds swamp the ship with water. There is no possibility of progress, only of riding out the storm with as little damage as possible. To this end the first mate makes a roll which is interpreted as follows. If no effort is made it counts as a failure.
Success Result
Critical ${ }^{3}$ -
Critical ${ }^{2}$ Check for man overboard at +6 bonus
Critical Check for capsize vs 1, man overboard at +2 bonus
Special Check for capsize vs 5, man overboard
Normal Check for capsize vs 10, man overboard at -2 penalty
Miss $\quad$ Check for capsize vs 20, man overboard at -6 penalty
Failure Capsize, 12 minutes per ton
Fumble Capsize, 9 minutes per ton
Fumble ${ }^{2}$ Capsize, 6 minutes per ton
Fumble ${ }^{3}$ Breaks apart over a number of minutes equal to the square root of tonnage

| Wave Height |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bs | Wind | 1 | 2, 3 | 4-7 | 8, 9 | 10 |
| 0 | $<1$ | - | - | - | - | $1 "$ |
| 1 | 1-3 | $1{ }^{\prime \prime}$ | $2 "$ | $4 "$ | 4" | $4{ }^{\prime \prime}$ |
| 2 | 4-6 | $4 "$ | $6 "$ | 8" | 10" | 12" |
| 3 | 7-10 | $1^{\prime}$ | $11 / 2^{\prime}$ | $2^{\prime}$ | $21 / 2^{\prime}$ | 3' |
| 4 | 11-16 | $2^{\prime}$ | $21 / 2^{\prime}$ | 3' | $4^{\prime}$ | $5 '$ |
| 5 | 17-21 | 51/2' | $6^{\prime}$ | $61 / 2{ }^{\prime}$ | $71 / 2^{\prime}$ | $8^{\prime}$ |
| 6 | 22-27 | $71 / 2^{\prime}$ | $8{ }^{1 / 2}$ | $91 / 2^{\prime}$ | $1112^{\prime}$ | $13{ }^{\prime}$ |
| 7 | 28-33 | $11^{\prime}$ | $12^{\prime}$ | 13' | $15^{1 / 2}{ }^{\prime}$ | $18^{\prime}$ |
| 8 | 34-40 | $16^{1 / 2}{ }^{\prime}$ | 18' | 191/2' | $22^{1 / 2}{ }^{\prime}$ | $25^{\prime}$ |
| 9 | 41-47 | 18' | 201/2' | $23 '$ | $28^{\prime}$ | 33' |
| 10 | 48-55 | $24^{\prime}$ | 27' | 291/2' | $36^{\prime}$ | 42' |
| 11 | 56-63 | $30^{\prime}$ | $34^{\prime}$ | 371/2' | $45^{\prime}$ | 52' |
| +1 | +9 | +8' | +8' | +8' | +8' | $+8^{\prime}$ |

Tim Doty


## UJEATHER

One of the more complicated mechanisms at work in the world is without a doubt the weather. Its chaotic nature makes it particularly well-suited to the standard gaming mechanic of dice rolling, but the complexities inherent in it complicate matters significantly. The approach taken in Rune Master is to define weather as specific conditions relative to the generalized climate of a region.

For example, a region may be noted as having driving rains for two months out of the year and being arid the other ten months. Any slackening of rainfall during those two months is a significant departure, while having any precipitation at other times is an equally significant departure.
Consequently the first step in determining the weather is to determine the generalized weather patterns of the region.

The climate of a region is defined as the average weather over an extended period of time. As illustrated above simply averaging the weather from day to day is insufficient-seasonal behavior must be accounted for.

## Characteristics

When describing the weather there are six primary characteristics: temperature, humidity, precipitation, cloud cover, wind speed and wind direction. Although all of these are related they do so in a chaotic fashion so for gaming purposes largely ignoring the interrelations is of no moment. For each climate there is given a series of typical days with rules for progressing from one to the next. The

| Unrestrained Characteristics |  |  |  |
| :---: | :--- | :---: | :--- |
| $1 d 100$ | Cloud Cover | $1 d 8$ | Wind Direction |
| $01-10$ | None | 1 | North |
| $11-20$ | Whisps | 2 | Northeast |
| $21-30$ | Scattered | 3 | East |
| $31-40$ | Slight | 4 | Southeast |
| $41-60$ | Cloudy | 5 | South |
| $61-80$ | Overcast | 6 | Southwest |
| $81-90$ | Dense | 7 | West |
| $91-100$ | Complete | 8 | Northwest |

weather of any given day is considered to be a deviation from the current typical day. The stability of a weather characteristic determines how likely the weather is to match that of the typical day.

The weather of any given day is unlikely to be static. Generally it is colder at night and warms during the day, the wind speed is likely to be higher at some points than others and in most cases it is unlikely for precipitation to last for a twenty four hour period. On the whole it is up to the referee to interpret the day's weather at any specific time during the day.

## Unrestrained

Some characteristics are so variable that they can freely take any value. Examples of this include cloud cover and wind direction. Other characteristics are inherently constrained to some range though they may for game purposes be considered to be unrestrained within that range. For example, if temperature were considered to be unrestrained from $30^{\circ}$ to $100^{\circ}$ then the actual temperature would be found by rolling $1 \mathrm{~d} 100 \times 0.7+30$; a roll of 64 would indicate a temperature of $75^{\circ}$.

## Fitted

Most of the time a characteristic will be variable, but show a greater tendency toward values at or near the typical day than far from it. In such a case a close approximation would be $3 \mathrm{~d} 6 \div 10$ times the delta plus the mean. As this fit leaves out the extrema that should properly be there if the minimum is rolled it should be replaced with 1s6 and if the maximum is rolled it should be replaced with $21-$ 1s6.

## Clustered

In some cases there is room for significant variation but the characteristic rarely varies significantly from the typical value. In these cases a roll of 1 d 6 is made. If the roll is a 1 then the characteristic is adjusted downward by the delta; if the roll is a 6 then the characteristic is adjusted upward by the delta. If the characteristic was adjusted then the die is rolled again until the characteristic is no longer adjusted in the same fashion. For example, if the temperature is clustered around $100^{\circ}$ with a delta of $2^{\circ}$ and a 1 is rolled then it is unusually cool at $98^{\circ}$. Because the temperature was adjusted the die is
rolled again, and another 1 is rolled further adjusting the temperature to $96^{\circ}$. As the temperature was adjusted again another roll is called for, but this time results in a 6 . Because this does not result in another downward adjustment the temperature is now fixed at $96^{\circ}$.

## Change Over Time

The foregoing is sufficient to establish the weather on any given day, but in most regions there is a progression from one day to the next. Even if $60^{\circ}$ and $100^{\circ}$ are both valid temperatures it is unlikely to go straight from one to the other. This constraint is described as follows.

## Random

In those cases where there is no particular rhyme or reason the characteristic can be simply determined fresh each day. Wind direction is a typical example of this where it can fluctuate significantly.

## Fluctuating

Most weather fluctuates without jumping wildly from one condition to the next. If within a range of the same typical day then the change can be resolved by rolling 1d10 interpreted depending on how far removed from the typical day the last state was. Use the Stable Changes table; the $3 \Delta$ columns are used for variations of 3 or more deltas from typical. An asterisk is interpreted as a delta $1 / 6$ the time.

For example, if the typical temperature is a stable $80^{\circ}$ with a $2^{\circ} \Delta$ and a starting temperature of $84^{\circ}$ then the $2 \Delta$ Above column is consulted. A roll of 5 results in $-1 \Delta$, an adjustment of one delta
increment down in temperature to $82^{\circ}$. The next day the $1 \Delta$ Above colum is consulted and a roll of 7 is made indicating no shift. On the third following day a 2 is rolled for another $-1 \Delta$ shift down to $80^{\circ}$.

Wind Dial


## Stable

In some cases the changes are slow and gradual with no sudden shifts. First roll 1d6 to see if there is a change. If the roll is greater than the stability score then a change occurs. If the state is typical then roll a single die: on an even result the state increases one delta, otherwise it decreases one delta. If the state is atypical roll the die indicated for the stability score. If the roll is odd and exceeds the current delta then the delta is increased by one, otherwise it is decreased.

For example, if the wind is Stable 5 blowing west and is

| Stability |  |
| :---: | :--- |
| Score | Die |
| 1 | 1 d 12 |
| 2 | 1 d 10 |
| 3 | 1 d 8 |
| 4 | 1 d 6 |
| 5 | 1 d 4 | currently blowing west then 1d6 is rolled to see if there is a change. The first day a 6 is rolled and, being greater than the stability of 5 , the wind shifts. A single die is rolled to determine by even-odd the direction of the shift; the roll is even so the wind changes quarter by $+1 \Delta$ to west northwest. The second day another 1 d 6 is rolled and a 1 results. Not being greater than 5 there is no


| Fluctuating Changes |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 d10 | $3 \Delta$ Below | $2 \Delta$ Below | $1 \Delta$ Below | Typical | $1 \Delta$ Above | $2 \Delta$ Above | $3 \Delta$ Above |
| 1 | $*$ | $-1 \Delta$ | $-1 \Delta$ | $-2 \Delta$ | $-2 \Delta$ | $-2 \Delta$ | $-3 \Delta$ |
| 2 | - | - | $-1 \Delta$ | $-1 \Delta$ | $-1 \Delta$ | $-2 \Delta$ | $-2 \Delta$ |
| 3 | - | - | - | $-1 \Delta$ | $-1 \Delta$ | $-1 \Delta$ | $-2 \Delta$ |
| 4 | - | - | - | - | $-1 \Delta$ | $-1 \Delta$ | $-1 \Delta$ |
| 5 | $+1 \Delta$ | - | - | - | - | $-1 \Delta$ | $-1 \Delta$ |
| 6 | $+1 \Delta$ | $+1 \Delta$ | - | - | - | - | $-1 \Delta$ |
| 7 | $+1 \Delta$ | $+1 \Delta$ | $+1 \Delta$ | - | - | - | - |
| 8 | $+2 \Delta$ | $+1 \Delta$ | $+1 \Delta$ | $+1 \Delta$ | - | - | - |
| 9 | $+2 \Delta$ | $+2 \Delta$ | $+1 \Delta$ | $+1 \Delta$ | $+1 \Delta$ | - | - |
| 10 | $+3 \Delta$ | $+2 \Delta$ | $+2 \Delta$ | $+2 \Delta$ | $+1 \Delta$ | $+1 \Delta$ | $*$ |
|  |  |  |  |  |  |  |  |

change in the wind. On the third day a 3 is rolled so the wind remains unchanged. In fact it isn't until the fourteenth day that another six is rolled. With stability 5 a 1 d 4 is then rolled and, being a 2 , the delta is decreased by one which takes it back to the typical west wind. It would have required a roll of 3 on the 1 d 4 to increase the delta to a north wind and the greatest shift possible would be a northeastern wind.

## Climate

The provided climates are not intended as scientific or exhaustive, but only as examples and starting points. Things such as the rate, amount and timing of precipitation throughout the year vary considerably even between nearby cities. Humidity does not only come from rainfall, and so on. There is no consideration made for vegetation or terrain, rivers or lakes, latitude or much else. Climatology is complex, but for game purposes it is often sufficient to have a simple way of generating weather conditions that are somewhat reasonable.

## Arctic

An arctic climate is typical of polar regions that are bitterly cold year round. There is usually little to no precipitation with some temperature fluctuation through the year.

## Desert

A desert climate experiences the greatest temperature fluctuation on a daily basis with precipitation
being limited and seasonal. Although this is the assumption for the desert climate presented here there is no reason the precipitation couldn't be spread out over an entire year-it would just require different tables.

## Temperate

A temperate climate is one familiar to Europe and other mid-latitude regions. There is significant seasonal variation, but the summers do not get excessively hot, nor do the winters get bitterly cold. Spring and autumn are transitional seasons and may experience more storms than summer or winter.

## Tropical

A tropical climate is typical of equatorial coastal regions. Temperatures are usually warm and the greatest seasonal variation is usually rainfall.

## Precipitation

These rules describe precipitation in terms of rainfall and variance from rainfall. Rainfall itself has a rate and length which combined determine the amount deposited. Snow is considered to be twice the amount of the equivalent rainfall. For game purposes, precipitation that occurs when the average low temperature is below $32^{\circ}$ is snow. Hail and sleet occur when the average temperature is above $32^{\circ}$ but the current temperature is below that.

For example, if $1 / 2$ " of precipitation is called for during winter in a temperate climate it is presumed to be 1 " of snow. On the other hand if $1 / 2$ " of rain is

| Climate |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Arctic |  |  | Desert |  |  | Temperate |  |  | Tropical |  |  |
| Season | High | Low | Prec. | High | Low | Prec. | High | Low | Prec. | High | Low | Prec. |
| Early Spring | $0^{\circ}$ | $-15^{\circ}$ | 5\% | $80^{\circ}$ | $40^{\circ}$ | 3\% | $60^{\circ}$ | $40^{\circ}$ | 50\% | $80^{\circ}$ | $75^{\circ}$ | 50\% |
| Spring | $10^{\circ}$ | $-5^{\circ}$ | 5\% | $85^{\circ}$ | $45^{\circ}$ | 10\% | $65^{\circ}$ | $45^{\circ}$ | 60\% | $85^{\circ}$ | $80^{\circ}$ | 90\% |
| Late Spring | $25^{\circ}$ | $15^{\circ}$ | 5\% | $95^{\circ}$ | $55^{\circ}$ | 50\% | $75^{\circ}$ | $55^{\circ}$ | 80\% | $85^{\circ}$ | $80^{\circ}$ | 50\% |
| Early Summer | $40^{\circ}$ | $30^{\circ}$ | 5\% | $105^{\circ}$ | $65^{\circ}$ | 10\% | $85^{\circ}$ | $65^{\circ}$ | 50\% | $85^{\circ}$ | $80^{\circ}$ | 30\% |
| Summer | $50^{\circ}$ | $35^{\circ}$ | 5\% | $110^{\circ}$ | $70^{\circ}$ | 3\% | $90^{\circ}$ | $70^{\circ}$ | 50\% | $85^{\circ}$ | $80^{\circ}$ | 10\% |
| Late Summer | $45^{\circ}$ | $35^{\circ}$ | 5\% | $105^{\circ}$ | $65^{\circ}$ | 2\% | $80^{\circ}$ | $60^{\circ}$ | 50\% | $85^{\circ}$ | $80^{\circ}$ | 30\% |
| Early Fall | $35^{\circ}$ | $30^{\circ}$ | 5\% | $100^{\circ}$ | $60^{\circ}$ | 1\% | $70^{\circ}$ | $50^{\circ}$ | 50\% | $85^{\circ}$ | $80^{\circ}$ | 50\% |
| Fall | $20^{\circ}$ | $10^{\circ}$ | 5\% | $90^{\circ}$ | $50^{\circ}$ | 0\% | $65^{\circ}$ | $45^{\circ}$ | 50\% | $80^{\circ}$ | $75^{\circ}$ | 100\% |
| Late Fall | $0^{\circ}$ | $-10^{\circ}$ | 5\% | $85^{\circ}$ | $45^{\circ}$ | 0\% | $55^{\circ}$ | $35^{\circ}$ | 50\% | $80^{\circ}$ | $75^{\circ}$ | 50\% |
| Early Winter | $-10^{\circ}$ | $-20^{\circ}$ | 5\% | $80^{\circ}$ | $40^{\circ}$ | 0\% | $45^{\circ}$ | $25^{\circ}$ | 50\% | $80^{\circ}$ | $75^{\circ}$ | 30\% |
| Winter | $-15^{\circ}$ | $-30^{\circ}$ | 5\% | $75^{\circ}$ | $35^{\circ}$ | 1\% | $40^{\circ}$ | $20^{\circ}$ | 50\% | $80^{\circ}$ | $75^{\circ}$ | 10\% |
| Late Winter | $-5^{\circ}$ | $-20^{\circ}$ | 5\% | $75^{\circ}$ | $35^{\circ}$ | 2\% | $50^{\circ}$ | $30^{\circ}$ | 30\% | $80^{\circ}$ | $75^{\circ}$ | 30\% |

## Tim Doty

called for during late fall in a temperate climate when the current temperature is $32^{\circ}$ then it is presumed to be sleet or hail (depending on the rate at which it is falling).

## Putting It Together

While these rules attempt to make it easy to quickly determine the weather it is often helpful to do this before hand, say by putting it on the gaming calendar. This serves two purposes. First, it allows a few minutes of work to determine the next week worth of weather. Second, it makes it easier to deal with spells to predict the weather.

| Rate of Accumulation for Precipitation |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Description | per hour | $12^{\prime \prime}$ | $8^{\prime \prime}$ | $4^{\prime \prime}$ | $2^{\prime \prime}$ | $l^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $1 / 8^{\prime \prime}$ | $1 / 16^{\prime \prime}$ |  |  |
| Extreme | $2^{\prime \prime}$ | $1-21$ | $1-7$ | $1-6$ | 1,2 | 1 | - | - | - | - |  |  |
| Torrential | $1 \prime \prime$ | $22-58$ | $8-14$ | $7-28$ | $3-16$ | 2,7 | 1 | - | - | - |  |  |
| Severe | $3 / 44^{\prime \prime}$ | $59-88$ | $15-40$ | $29-66$ | $17-50$ | $8-33$ | $2-7$ | 1,2 | 1 | - |  |  |
| Heavy | $1 / 2^{\prime \prime}$ | $89-100$ | $41-78$ | $67-92$ | $51-84$ | $34-71$ | $8-33$ | $3-15$ | $2-8$ | 1,2 |  |  |
| Rain | $1 / 4^{\prime \prime}$ | - | $79-100$ | $93-99$ | $85-98$ | $72-94$ | $34-71$ | $16-48$ | $9-34$ | $3-16$ |  |  |
| Light Rain | $1 / 8^{\prime \prime}$ | - | - | 100 | 99,100 | $95-99$ | $72-94$ | $49-83$ | $35-72$ | $17-50$ |  |  |
| Drizzle | $1 / 16^{\prime \prime}$ | - | - | - | - | 100 | $95-99$ | $84-97$ | $73-94$ | $51-84$ |  |  |
| Sprinkle | $1 / 32^{\prime \prime}$ | - | - | - | - | - | 100 | $98-100$ | $95-100$ | $85-98$ |  |  |
| Mist | $1 / 64^{\prime \prime}$ | - | - | - | - | - | - | - | - | 99,100 |  |  |



## SKiLL8

Although skills are discribed generally in Book 1, several skills require fuller explanation than space allowed. Several of these-particularly those other than magic-are elaborated here.

## Tim Doty

## AпіMal Trairing

Each general type of animal training is a separate skill. Dog training is different from horse training is different from bird-of-prey training. The skill for training is itself generalized: a dog trainer can train for obedience, guarding, hunting, etc. However, an auxiliary knowledge skill may be required for certain tasks: if you don't know how and what a pointer hunting dog is supposed to do you can hardly train a dog to do that.

There are two principle uses of animal training: obedience training and performance training. An animal may respond to one type of training better than another, depending on its intelligence and temperament.

Obedience training is a matter of breaking the animal's natural instincts to allow common association with people. "Breaking a horse" is a form of obedience training, as is house breaking a domestic animal. These are all behavioral impulses.

Performance training is done to get an animal to understand and obey commands. Usually, though not necessarily, an animal must be obedience trained before performance training can be done. Each command is treated separately and a list of known commands should be kept for the animal. As part of the manner in which it is trained an animal can be trained to respond to anyone, or just the trainer. Often the latter is the case and, upon transferring an animal to an owner the animal will be trained to respond to the owner as if he were the trainer.

In many cases commands are verbal, although this is not always the case (for example, falcons and the lure). Verbal commands should be short and succinct. The animal's response to the command should be easily described or demonstrated. If it is not then the training will be more difficult. Any task that is complex or requires intelligence, easily described or not, is more difficult to train. It is recommended that any player using this skill have the commands build on one another. After an animal has been trained to stay, for example, an additional command of guard would be appropriate.

The use of this skill takes time, the amount
being determined by the difficulty of the training at hand. For simple tasks two one hour sessions within a week are sufficient. For moderate tasks five one hour sessions within a week are required. For relatively complex tasks at least 25 hours over a two week period are required, with more complex tasks taking even more time.

By continuing training on tasks that have already been taught the animal's response will become better conditioned. Each time that a task has been successfully trained the animal gains a level in that task. The base chance that an animal will perform the task when commanded is equal to the training level, plus the animal's WIT, times five percent. The referee may substitute another number for the animal's WIT if he sees fit.

In general, obedience training is a moderate task for animals that are normally domesticated. For feral animals, however, it becomes a complex task and is never completely successful. A good example of this is with birds of prey.

## Falconry

This skill is used to train and fly hawks, falcons, owls and eagles in the hunt. It requires the use of the proper equipment, such as a lure, to practice. It takes considerable time and effort to train a bird of prey in this way and the bird will only return to the falconer for a limited period of time, eventually flying off never to return. There is a cumulative one point penalty to the bird's WIT (for purposes of obeying commands) for every six months it is kept. Some birds may have a bonus to WIT for responsiveness to training (such as the harris hawk with +2 ) and others may have a penalty (such as the peregrine with -2 ).

Tim Doty

## CRAFH8

Although there are many different crafts, the same general rules apply to all of them. Most are considered to be of average difficulty, though some few are harder or easier than normal. This is not an attempt at a complete listing of crafts: the referee should feel free to add crafts as desired. Although most crafts are appropriate for a townsman making a living there are some crafts which appeal to player characters as wellespecially when trying to master certain runes.

## Crafting

The time, tools and materials necessary to complete a task in a craft lie well beyond the scope of these rules. For game purposes any given task is assigned a difficulty score by the referee based on examples given in the craft description with a time to complete either specified by the referee or estimated based on the task difficulty and the project speed. Generally a craftsman can choose to attempt a job more quickly or methodically. If a job is rushed it can be done in half the time, but with a 6 penalty to the skill. If a job is done slowly and methodically taking double the time there is a bonus of 6 to the skill.

The quality of workmanship depends on the degree of success. If the roll is missed the work is successfully completed, but is shoddy. A failure indicates that the effort was a complete failure while a fumble might indicate that twice the materials expected were consumed, tools were broken or some similar misadventure.

## Simple Tasks

Simple tasks can usually be completed in a matter of minutes with even an apprentice having a reasonable chance of making the item properly. Sewing a single signature into a book binding, making a metal rose, and cutting cloth to a basic pattern are all examples of simple tasks.

## Average Tasks

An average task can be expected to take an hour, more or less, to complete. For most crafts this is the everyday work of a journeyman and includes such tasks as binding a book or forging a blade.

## Hard Tasks

Hard tasks are difficult for most journeymen but the expected work of full artisans. These tasks usually take a several hours at least to complete and include making a self bow.

## Complex Tasks

A complex task is challenging even for a master artisan and can take considerable time, usually several days of hard work, to complete. Constructing a composite bow or forging a pattern-welded axe head are examples of a complex tasks.

## Multiplex Tasks

A multiplex task is difficult even for a master artisan who is meticulous and takes his time. Such painstaking work is not normally undertaken and then only with promise of significant compensation. Making an elf bow or advanced tumbler lock is a multiplex task.

| Craftsmanship |  |  |  |
| :--- | :--- | :--- | :---: |
| Success | Quality | Generalization |  |
| Critical $^{3}$ | Incredible | $2 \times \mathrm{HP},+4$ |  |
| Critical $^{2}$ | Exceptional | $13 / 4 \times \mathrm{HP},+3$ |  |
| Critical $^{2}$ | Very Fine | $11 / 2 \times \mathrm{HP},+2$ |  |
| Special | Fine | $11 / 4 \times \mathrm{HP},+1$ |  |
| Normal | Normal | Standard |  |
| Miss | Shoddy | Half HP, -2 |  |


| Project |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Task | Diff. | Quick | Normal | Slow |
| Simple | 5 | 1 minute | 4 minutes | 15 minutes |
| Average | 10 | 10 minutes | 40 minutes | 21/2 hours |
| Hard | 15 | $12 / 3$ hours | $62 / 3$ hours | 2 days $\dagger$ |
| Complex | 25 | $16^{2} / 3$ hours | $51 / 2$ days $\dagger$ | 21 days $\dagger$ |
| Multiplex | 40 | 13 days $\dagger$ | 2 months $\ddagger$ | 8 months $\ddagger$ |
| Omniplex | 60 | 51/3 months $\ddagger$ | 21 months $\ddagger$ | $62 / 3$ years* |
| Transcendent | 90 | 41/2 years* | 173/4 years* | 663/4 years* |
| $\dagger$ day refers to a 12 hour "work day" |  |  |  |  |
| $\ddagger$ month refers to a 26 day (312 hour) "work month" |  |  |  |  |
| * year refers to a 312 day (3744 hour) "work year" |  |  |  |  |

## Omniplex Tasks

An omniplex surpasses the capability of even the most skilled and careful artisan to craft in a single attempt without considerable luck. Few things approach this level of difficulty, but attempting to design and build Babbage's Difference Engine with the Mechanical skill would be one example.

## Transcendent

Tasks of this difficulty are appropriate for otherworldly feats such as designing an building a steam engine driven mechanical general purpose computing device.

## Equipment

There are four levels of equipment: basic, field, standard and comprehensive. Exactly what is included varies with the craft. The difficulty of the craft is assumed to translate into the expense of the equipment-use the cheap price column for easy crafts, the average price column for average crafts, the expensive price column for hard crafts and the very expensive column for very hard crafts.

Basic equipment is a composite which the craftsman is expected to buy from various sources as appropriate. It includes the bare essentials of his craft and is usually portable with a total weight of around fifty pounds and requiring three cubic feet or so of space to store. Although requirements vary, to actually use the equipment will at a minimum require 20 square feet of floor space, though this can be compressed to half that by use of a table or workbench.

Field equipment is very much the same as basic equipment, except for being more complete in terms of tool selection and commonly used items. The quality of the equipment is generally better as well. Field equipment is usually semi-portable with a total weight of around a hundred pounds and requiring five cubic feet or so of space to store. Although requirements vary, to actually use the equipment will at a minimum require 30 square feet of floor space, including the use of one or more solid workbenches (having at least 15 square feet of surface) or the craft equivalent.

Standard equipment is a more elaborate setup requiring 100 square feet of room and includes work tables, shelving and lamps in addition to the
regular equipment. Such a workshop is not portable unless it is installed in a sufficiently large wagon. However, it is important to note

## Equipment

| Equipment | Modifier |
| :--- | :---: |
| Basic | -6 |
| Field | -2 |
| Standard | 0 |
| Comprehensive | +2 |

that a standard wagon lacks the strength to deal with the stresses of having a constant, heavy load in addition to the rigours of the craft-labor.

Comprehensive equipment is the same as a standard workshop except for including all manner of odd and unusual equipment, some that is little used, the entire setup requiring 250 square feet of room.

## Craft Skills

Each craft is a separate skill though some are related and may be substituted for one another. If this is possible it is noted in the description of the craft in question. Some crafts require at least some expertise in another craft before they can be learned. In such cases a character has skill score 0 in the craft if the prerequisite is not met, no matter how many experience points may be spent on the skill.

Most tasks are normal time and of average difficulty. Several crafts deal with creating patterns or designs (Craft Embroidery, Craft Metal Engraver, etc.). With these the size of the pattern to be created determines the time (Quick, Normal or Slow) and the relative complexity of the pattern determines the difficulty (Simple, Average, etc.).

A crafter can substitute a prerequisite craft skill, but doing so increases the penalty by ten. If a craft has a multiple requirements then the lesser of the prerequisite skills must be used. For example, a character with Black Smith 18 and Leatherer 24 attempting could attempt to make armor using Black Smith (the lesser of the two skills) and an added penalty of 10 . To make leather armor would be difficulty 10 for being an average task, penalty of 10 for substituting a prerequisite skill gives an 18 against a 20 for $41 \%$ chance of success. If he lacked armorer tools but was using his black smith and leatherer tools instead then the resisting score rises to 30 and the chance of success drops to $18 \%$.

## Armorer (A) [Blacksmith 24, Leatherer 18]

An armorer uses high grade iron or steel to make metal armor. Chainmail is made from drawn wire with riveted links. Platemail has individually shaped, interlocking pieces held together with leather straps and rivets. Most armor is a Slow Complex task to make. Simple leather armor is a Slow Hard task. Tools include, but are not limited to, hammers, anvils, stakes, vices, grinders, drills, awls, stamps, chisels and punches.

| Task | Speed | Difficulty |
| :--- | :--- | :--- |
| Leather | 5 days | Average |
| Leather Byrnie | $21 / 2$ days | $?$ |
| Ring mail | 8 days | Hard |
| Scalemail Byrnie | 5 days | $?$ |
| Scalemail Gauntlets | 7 days | $?$ |
| Chainmail | 1 month | Complex |
| Chainmail Byrnie | 15 days | $?$ |
| Platemail | 2 months | Complex |
| Platemail Helmet | 3 days | $?$ |
| Platemail Hat | 3 hours | $?$ |
| Full Plate Great Helm | 5 days | $?$ |

## Baker (A) [Cook 9]

A baker makes bread and pastries. The ovens are large and not suitable for household use-each community has its ovens. In a village these will be public, but in towns and cities the manufacture of bread is regulated almost as if it were a public service. Only authorized bakers can use a town's ovens and they can only charge according to the schedule fixed by the local lord.

| Task | Speed | Difficulty |
| :--- | :--- | :--- |
| Flat bread | 1 hour | Simple |
| Most breads or pastries | 2 hours | Average |
| Fancy pastries | 3 hours | Hard |

## Basket Weaver (A)

This craft is used to weave reeds, other grasses, or most any pliable strips into all manner of baskets.

| Task | Speed | Difficulty |
| :--- | :--- | :--- |
| Simple basket | Slow | Simple |

## Binder (A)

This craft is used to bind, decorate and repair books. Most books are bound by sewing "signatures" to a cloth backing, which itself is sewn or glued to the covers. Covers are most often of cloth and pasteboard. A signature generally consists of four
sheets of paper stacked and folded down the middle resulting in sixteen pages. The folded signatures are then stacked together to form the book with stitching down each signature's fold securing it to the cloth binding strip. Tools include needles and various knives.

| Task | Speed | Difficulty |
| :--- | :--- | :--- |
| Sew single signature | Quick | Simple |
| Bind book | Slow | Average |
| Decorated bound book | Slow | Hard |
| Blacksmith (A) |  |  |

A blacksmith produces nails, iron utensils, shoes horses, draws wire and in general makes things from wrought iron or steel. He can also repair most items which he could make. The basic processes of a blacksmith are forging, welding, heat treatment and finishing. Forging includes the techniques of drawing, upsetting, shrinking, bending and punching. Drawing wire is a painstaking task: it is a Slow Complex task to turn twenty five pounds of bar stock into wire. Further, the wire is not actually drawn: rather, it is cut, hammered for length and rounded. Most tasks involve a combination of techniques and processes.

Making a low quality sword blade is a Slow Average task. Such a blade will have half the HP of a normal sword and be lacking any adornment, even a hilt, and so require more work to be functional. Making a pattern-welded axe head is a Quick Complex task. A more typical axe head is an Average task that is Normal to Slow depending on the size.

Basic blacksmithing tools include a hammer and a light anvil. It is presumed that the blacksmith will provide sufficient fire for a forge on his own. Field tools will add a second anvil, tongs and some swage as well as a portable forge. Standard tools include a forge, multiple anvils, hammers and tongs as well as a variety of swages. Comprehrensive tools include a larger forge, more hammers and swages and jigs. Note that medieval wrought iron contained a significant amount of slag making it tough and resistant to rusting as well as faciliting forge welding.

| Task | Speed | Difficulty |
| :--- | :--- | :--- |
| Low grade sword | Slow | Average |
| Pattern welded axe head | Quick | Complex |


| Typical axe head | Normal | Average | task, a | Boatwright Structure |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Large axe head | Slow | Average | composite bow | Success | Wood | Metal |
| Draw 25 pounds of wire | Slow | Hard | is a Slow | Success Critical ${ }^{4}$ | Wood 128 | Metal 2187 |
| Boatwright (A) [Carpenter 18] |  |  | Complex task | Critical ${ }^{3}$ | 64 | 729 |
| A boatwright makes boats. For smaller boats, such as canoes and punts, he may do all the work himself |  |  | is a Slow | Critical ${ }^{2}$ | 32 | 243 |
| but for larger vessels he will need a crew of to assist. |  |  | Multiplex task. | Critical | 16 | 81 |
|  |  |  | Multiplex task. | Special | 8 | 27 |
| Nine out of ten of the wo | crew can | ubstitute | Task | Normal | 4 | 9 |
| carpenter or shipwright | atwr |  |  | Miss | 2 | 3 |
| ainder can only sub | ship | The |  | Failure | 1 | 1 |


| Task | Speed | Difficulty |
| :--- | :--- | :--- |
| Bireme | 3 months | 23 |
| Canoe | 4 hours | 3 |
| Johnboat | 6 hours | 2 |
| Pentakonter | 2 months | 15 |
| Punt | 9 hours | 3 |
| Ship's Boat | 1 day | 5 |
| Trireme | 4 months | 32 |

## Bowyer (A) [Wood Carver 12]

This craft is used to make bows. This requires the selection of the proper wood, its shaping and carving. In the case of a composite bow, horn and sinew are used in addition with glue to make a stave of composite material construction. Most bows are a Slow Hard task, but long blow is a Normal Hard

|  | Butcher Time |  |  |  |  |
| :--- | :---: | :--- | :--- | :--- | ---: |
| Size | Time | Size | Time | Size | Time |
| Extemely Tiny | 1 minute | Medium Small | 30 minutes | Huge | 16 hours |
| Very Tiny | 2 minutes | Medium | 1 hour | Enormous | 32 hours |
| Tiny | 4 minutes | Medium Large | 2 hours | Titanic | 64 hours |
| Very Small | 8 minutes | Large | 4 hours | Gargantuan | 128 hours |
| Small | 15 minutes | Very Large | 8 hours |  |  |

Speed Difficulty

| Self Bow | Normal | Hard |
| :--- | :--- | :--- |
| Bow, Small or Short Bow | Slow | Hard |
| Built Bow | Slow | Complex |
| Composite or Horse Bow | Slow | Complex |
| Elf Bow | Slow | Multiplex |

## Brewer (A)

This craft is used to brew various beer: this requires a vat, malt, hops and grain. Small beer is a Simple task, but it takes two days, with about a full "work day" of labor the first day, to produce. Ale production is a related process that takes about three days to produce. A brewery will normally produce small beer as a by-product of the ale. A single brewer working like a dog every day can sustain an output of about 80 gallons of ale and 80 gallons of small beer a week (it isn't just the brewing, he must also bottle or otherwise containerise the output).

## Brickmaker (A)

This craft is used to make bricks.

## Butcher (A)

This craft is used to efficiently butcher an animal and get the best cuts practical. This is an Average task for most animals. The time taken is roughly based on size as one minute for an extremely tiny creature and doubled for each size category larger the creature is. The following table is a guideline for interpreting the level of success with the amount of meat recovered as a percentage of the animals total weight.
Success Result
Critical ${ }^{3} \quad 60 \%$ recovery
Critical ${ }^{2}$ 55\% recovery
Critical 50\% recovery
Special $40 \%$ recovery
Normal 33\% recovery
Miss $25 \%$ recovery
Failure $20 \%$ recovery
Fumble 15\% recovery
Fumble ${ }^{2} \quad 10 \%$ recovery
Fumble ${ }^{3}$ 5\% recovery
Calligraphy (A)
This craft is used to form ornate letters and decorative script. Although technically no literacy is required as this is an illustrator skill it is normally
expected. Use of this skill requires varies inks and quills and is assisted by sand for rubbing out mistakes and sponges for managing bleeding. Scalpels can also be of use in fine detailing and edging.

## Carpenter (A)

A carpenter makes shelves, tables, chairs and the like. He works with wood knives, saws and glue. A rough carpenter specializes in large structural projects such as framing and roofing. A joister specializes in installing floors. A joiner specializes in making cabinets, furniture and other fine work. A trimmer specializes in molding and trim such as foor doors, and windows.

## Cartwright (A) [Carpenter 18]

This craft is used to make and repair carts, carriages or wagons-excepting the wheels for which Craft Wheelwright is needed.

## Chandler (A)

This craft is used to make a variety of candles. Rushlights, tallow candles and wax candles are the most common sorts. A rushlight is made by collecting rushes, usually in the summer or early fall, soaking and peeling them, then letting them dry and bleach in the sun for several days. Finally they are soaked or dipped in household fats and grease (including beeswax and mutton suet if possible). A $21 / 2$ foot rush will burn for about an hour.

A tallow candle is best made from a mixture of ox and sheep fat, though ox fat or cattle fat alone can be used. Pork fat can even be used but the candle will smell and drip even worse than a regular tallow candle. Manufacture starts with fatty remains obtained from a butcher which are boiled for a couple of hours, then strained and let cool (which will takes several hours or more). The tallow will be caked in a layer on top with gelatin and nasty grey water underneath. The tallow is removed and the process repeated to improve purity. The final tallow is formed into candles by repeated wick dipping or by mold. Wicks are made from rushes or twisted cotton fibers.

Wax candles are made by melting beeswax in a cauldron and repeatedly pouring it over a wick. The wax builds up and when the desired size is reached the candle is rolled on a hard surface to ensure
uniformity. Wooden frames for holding the wicks assist in production.

| Task | Speed | Difficulty |
| :--- | :--- | :--- |
| Rush Light | 4 days | Simple |
| Candles | 1 day | Average |

## Charcoaler (A)

This craft is used to turn wood into charcoal, a somewhat dangerous process consisting of creating a conical pile of wood having gaps at the bottom for air intake and a central shaft to serve as a flue, the entire pile being covered by dirt and then lit. Careful management is required to gain the highest return.. The return of charcoal from wood, by volume, is given by the level of success. Weight as a percentage is somewhat less than half that given for volume. For example, 1000 pounds of wood reduced to charcoal with a special success would yield 250 pounds. A smaller, adhoc, charcoal production is more difficult than a large operation. Reducing less than 1000 pounds of wood is Hard and reducing less than 10,000 pounds of wood is Average. Larger scale productions are Simple. However, a single charcoaler can only manage a wood pile less than 1000 pounds. The amount of wood that can be charcoaled is doubled for each additional charcoaler so it only takes four charcoalers to manage a 12,000 pound wood pile being reduced to charcoal.

| Success | Result |
| :--- | :--- |
| Critical $^{3}$ | $95 \%$ recovery |
| Critical $^{2}$ | $90 \%$ recovery |
| Critical | $80 \%$ recovery |
| Special | $60 \%$ recovery |
| Normal | $40 \%$ recovery |
| Miss | $25 \%$ recovery |
| Failure | $10 \%$ recovery |
| Fumble | $10 \%$ chance runaway fire |
| Fumble | $25 \%$ chance runaway fire |
| Fumble $^{3}$ | $40 \%$ chance runaway fire |

## Cobbler (A)

This craft is used to measure and make leather shoes, as well as re-sole shoes and make other repairs. It is also used with boots. To make a pair of modest leather shoes is an Average task.
Confectioner (A) [Cook 9]

A confectioner makes sweetmeats. Most dishes are either Simple or Average tasks to make.

## Cook (A)

This is the craft of household cooking: in otherwords what can be made using pots, pans and a cooking fire. Gruels, stews and roasts are the most common things made.

## Cooper (A)

A cooper makes barrels and casks. There are four general types: dry barrels for nails, fruit, vegetables and other goods that are dry and don't need protection from moisture. Drytight barrels are used for flour and other goods that must be kept dry. White cooping refers to making containers such as buckets that must hold liquid but are not closed. Wet barrels are used for beer and other liquids.

| Task | Speed | Difficulty |
| :--- | :--- | :--- |
| $21 / 2$ gallon bucket | Normal | Average |
| 60 gallon tub | Slow | Average |
| 32 gallon "wet" barrel | Normal | Hard |

## Distiller (A)

This craft is used to distill liquor.

## Dyer (A)

This craft is used to make dyes from pigments and plant sources. The crafter generally does or supervises the actual dying of the wool, thread or cloth.

## Embroidery (A)

This craft is used to embroider cloth. It requires various needles depending on the coarseness of the cloth being embroidered, the weight of the thread being used, and of course a supply of various colored threads. The difficulty of any given embroidery depends on its complexity with the time required being a function of both size and complexity.

| Task | Speed | Difficulty |
| :--- | :--- | :--- |
| Plain initials, 1" | Normal | Simple |
| Family crest, 4" | Normal | Average |
| Multi-colored crest, 8" | Normal | Hard |
| Oriental dragon, 15" | Normal | Complex |

## Fletcher (A)

This craft is used to make arrows. Arrows require delicate balance and proper springiness. The
fletching must be correctly aligned. There are four separate tasks to making an arrow from raw materials: straightening and shaping the shaft, making the nock, attaching the feathers and attaching a point. Straightening and shaping the shaft is a slow, tedious procedure. The straighter the shaft the more accurate the arrow, spining matches the arrow to a bow weight and cutting to length matches draw length. The arrow stock is heated and shaved to achieve desired straightness and spine before being cut to length. A nock may be cut directly into the butt end of the arrow, or a piece of horn glued in place. Although not a slow process it requires care to cut and attach a nock. Fletching is another slow, tedious process consisting of splitting feathers to form vanes, gluing them to the shaft and shaping the vane. Placement of the vanes is critical and the gluing process, using glue and sinew, is slow and tedious. Finally the tip is made or attached. A "fire hardened" arrow is made by simply shaving the arrow tip to a point, but most arrow heads are made of stone, bone or metal. Metal arrow heads are generally attached by socketing while stone or bone arrow heads are generally lashed with sinew. While putting a nock or point on an arrow are simple tasks, working the shaft and fletching are each average tasks. In all cases a dozen arrows are the product given sufficient materials. This gives 7 to 8 hours to make a dozen arrows.

## Furnace Maker (A) [Mason 18]

This craft is used to make fireplaces, furnaces and kilns. A faulty furnace will be damaged excessively, and possibly catastrophically, through normal use.

| Success | Result |
| :--- | :--- |
| Critical $^{3}$ | - |
| Critical $^{2}$ | - |
| Critical $^{2}$ | - |


| Gem Cut |  |  |  |  |
| :--- | :---: | :---: | :--- | :---: |
| Cut | Difficulty | Value | Success | adjVal |
| Raw | n/a | $\times 1 / 8$ | Miss | $\times 1 / 2$ |
| Polished | 5 | $\times 1 / 2$ | Normal | $\times 1$ |
| Rounded | 8 | $\times 1$ | Special | $\times 1 / 1 / 4$ |
| Faceted | 10 | $\times 3$ | Critical | $\times 11 / 2$ |
| Table | 13 | $\times 5$ | Critical $^{2}$ | $\times 1^{3 / 4}$ |
| Brilliant | 16 | $\times 10$ | Critical $^{3}$ | $\times 2$ |

Special
Normal
Miss

Failure

Fumble
${ }^{2}$
incurs immediate minor damage from use. $90 \%$ chance of catastrophic failure if overheated, $25 \%$ chance of catastrophic failure each use

## Gem Cutter (H)

This craft is used to do fine stone work, such as gem finishing and inscribing on stones. The difficulty of finishing a gem depends on the method used while the difficulty of an inscription depends on the complexity of the pattern attempted.gem stones. Tools include miniature saws, stone holders, shaping wheels, polishing wheels and polishing compounds.

The value of a gem is modified based on the type of cut it has, or does not have, and the level of success achieved in that cut. A gem's value is a combination of its type, size, clarity, regularity, brilliance and absence of flaws. This is summarized in these rules as a single value. The basic value of a gem is for one that has been smoothed and polished with a normal level of success.

A raw gem is one in its raw state. In such a case only a jeweler can reliably identify the gem. The simplest and most reliable way to improve a raw gem is to polish it. Such a gem will be irregular and of no especial brilliance, but its clarity will be apparent.

A rounded gem has been shaped to remove irregularities, usually in as minimal a way as possible to preserve size while at the same time removing significant flaws. Thus even though the same

Tim Doty

| Lock Task Difficulty and Complexity |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Mechanism | Task | Key | Time | Miss | Success | Crit | Crit $^{2}$ | Crit $^{3}$ | Crit $^{4}$ |
| Turnkey | Simple | Simple | ES $\times 5+30$ minutes | $*$ | 1 | 2 | 2 | 3 | 3 |
| Pinlock | Average | Simple | ES $\times 15+45$ minutes | 1 | 2 | 3 | 4 | 5 | 6 |
| Screw | Average | Simple | ES $\times 20+90$ minutes | 2 | 3 | 4 | 5 | 6 | 8 |
| Wheel | Hard | Simple | ES +5 hours | 3 | 5 | 8 | 10 | 13 | 16 |
| Tumbler | Complex | Average | ES $\times 2+20$ hours | 5 | 10 | 13 | 16 | 20 | 25 |
| Combination | Complex | - | ES $\times 11 / 2+10$ hours | 4 | 8 | 10 | 13 | 16 | 20 |

gem rounded will generally be somewhat smaller than when simply polished it will often have fewer flaws and the regularity will slightly improve its brilliance. Combined with the regular appearance this will normally substantially appreciate the value of the gem.

A faceted gem is one which has been cut so as to have faces. This improves the brilliance and the opportunity is generally taken to further remove flaws. Due to increased brilliance a faceted gem is usually worth more than the same gem merely rounded despite the slightly decreased size.

A table cut gem has a large, flat face and is suitable for use in jewelry. It is very similar to faceting but generally has improved brilliance and this, combined with the greater ease of setting it in jewelry, increases its value.

A brilliant cut gem is one whose faces have been cut at an angle that, for that particular stone's index of refraction, maximizes the brilliance. This provides the greatest possible brilliance, far beyond other cuts, and thus the greatest value.

## Glassblower (H)

This craft is used to blow glass.

## Glazier (A)

This craft is used to make glazes. The crafter generally does the glazing himself or oversees the process.

## Joiner (A) [Carpenter 12]

A joiner is a carpenter specializing in making cabinets, furniture and other fine work.

## Joister (A) [Carpenter 12]

A joister is a carpenter specializing in installing floors.

## Leather Tooler (A)

This craft skill allows the character to cut, shape and otherwise work leather.

## Leatherer (A)

This craft skill is used to make items from leather.

## Locksmith (H) [Blacksmith 24]

A locksmith does very delicate, exacting work with iron and steel. He makes springs, miniature levers, etc. His most popular product is the padlock although he can make clockwork mechanisms as well.

The Lock Task Difficulty and Complexity table shows the project difficulties and lock complexities

| Lock Elaborateness |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| adjES | Normal | Special | adjES | Normal | Special | adjES | Normal | Special |
| 1 | $1-3$ | 1,2 | 11 | $121-143$ | $66-77$ | 21 | $441-483$ | $231-252$ |
| 2 | $4-8$ | $3-5$ | 12 | $144-168$ | $78-90$ | 22 | $484-528$ | $253-275$ |
| 3 | $9-15$ | $6-9$ | 13 | $169-195$ | $91-104$ | 23 | $529-575$ | $276-299$ |
| 4 | $16-24$ | $10-14$ | 14 | $196-224$ | $105-119$ | 24 | $576-624$ | $300-324$ |
| 5 | $25-35$ | $15-20$ | 15 | $225-255$ | $120-135$ | 25 | $625-675$ | $325-350$ |
| 6 | $36-48$ | $21-27$ | 16 | $256-288$ | $136-152$ | 26 | $676-728$ | $351-377$ |
| 7 | $49-63$ | $28-35$ | 17 | $289-323$ | $153-170$ | 27 | $729-783$ | $378-405$ |
| 8 | $64-80$ | $36-44$ | 18 | $324-360$ | $171-189$ | 28 | $784-840$ | $406-434$ |
| 9 | $81-99$ | $45-54$ | 19 | $361-399$ | $190-209$ | 29 | $841-899$ | $435-464$ |
| 10 | $100-120$ | $55-65$ | 20 | $400-440$ | $210-230$ | 30 | $900-960$ | $465-495$ |

for the different types of locks. The complexity of a lock is determined by the type of lock and the level of success in making it. When designing a lock the locksmith determines how elaborate (ES) to make the mechanism. The more elaborate the mechanism the more laborious it is to make or pick with the cumulative levels of success having to reach the adjusted elaboration score (adjES). The time to make a lock is dependent on the base elaborate score and the type of lock being constructed. Note that a miss when constructing a turnkey lock indicates the lock does not function while for other types of locks the complexity is reduced.

Making a screwlock key is a quick task, all other keys are normal speed.

The strength of a lock is used to resist brute force attempts to break it and can vary from 1 to 4 . A lock's AP is equal to this strength. A lock's HP are equal to AP $\times 5$. Smashing a lock damages the mechanism and makes it harder to pick: each point of damage is a cumulative 2 penalty to any attempt to pick it. There is a damage taken $\times 10 \%$ chance that a damaged lock will not open even with the proper key.

It is possible to make a lock from wood, though doing so does not decrease the project difficulty. It does require that the locksmith also have some skill with woodworking and the locks will be weaker. A hardwood lock has AP 1, HP 4 and weighs half as much as an AP 1 metal lock. The skill for crafting such a lock is the lesser of the Craft Locksmith and Craft Wood Carver.

Turnkey locks are the simplest kind and the easiest to pick. The "key" consists of a rod with a particular cross-sectional shape and size which fits into the lock and allows the bolt to be turned. A modest assortment of "keys" allows these to be picked with a bonus of 5 to skill. Trying to use an improvised "key" means that there is no bonus to skill. A turnkey lock is usually complexity 1.

Combination locks are somewhat more difficult to pick and definitely harder to make.

They require no tools to pick, but when well made can have a high complexity. Most combination locks are complexity eight, but an exceptionally well made one might be complexity twenty.
Wheel locks are perhaps the most common being only moderately (for a lock) hard to make. Fortunately they are only moderately hard to pick. A specially made key engages wheels inside the lock, the gaps between teeth allowing the key to turn despite stops built between the

| Sample Jewelry |  |  |  |
| :---: | :---: | :---: | :---: |
| Item <br> Ring | Metal Size | Weight | Base Value |
|  | copper $3 / 4 \times 1 / 4$ " | 43 grains | $5 / 8 \mathrm{cp}$ |
|  | silver $3 / 4 \times 1 / 4$ " | 50 grains | $81 / 2 \mathrm{cp}$ |
|  | gold $3 / 44^{\prime \prime} \times 1 / 4 "$ | 90 grains | 26 sp |
| Heavy Ring | copper $3 / 4 \times 1 / 2{ }^{\text {c }}$ | $5 / 8$ ounce | 4 cp |
|  | silver $3 / 4 \times 1 / 2^{\prime \prime}$ | $3 / 4$ ounce | $41 / 2 \mathrm{sp}$ |
|  | gold $3 / 44^{\prime \prime} 1 / 2^{\prime \prime}$ | $11 / 2$ ounces | $93 / 8 \mathrm{gp}$ |
| Light Chain | copper 12" | 26 grains | $3 / 8 \mathrm{cp}$ |
|  | silver 12 " | 30 grains | 5 cp |
|  | gold 12" | 55 grains | 16 sp |
|  | copper 18" | 43 grains | $5 / 8 \mathrm{cp}$ |
|  | silver $18{ }^{\prime \prime}$ | 50 grains | $81 / 2 \mathrm{cp}$ |
|  | gold 18" | 90 grains | 26 sp |
| Heavy Chain | copper 18" | $5 / 8$ ounce | 4 cp |
|  | silver 18" | $3 / 4$ ounce | $41 / 2 \mathrm{sp}$ |
|  | gold 18" | $11 / 2$ ounces | $93 / 8 \mathrm{gp}$ |
| Small Pendant | copper $3 / 4{ }^{\prime \prime}$ | 26 grains | $3 / 8 \mathrm{cp}$ |
|  | silver $3 / 4$ " | 30 grains | 5 cp |
|  | gold 3/4" | 55 grains | 16 sp |
| Heavy Pendant | copper 1" | $5 / 8$ ounce | 4 cp |
|  | silver 1" | $3 / 4$ ounce | $41 / 2 \mathrm{sp}$ |
|  | gold 1" | $11 / 2$ ounces | $93 / 8 \mathrm{gp}$ |
| Circlet | copper $1 / 2^{\prime \prime}$ | $1 / 2$ pound | 50 cp |
|  | silver $1 / 2{ }^{\prime \prime}$ | $1 / 2$ pound | 50 sp |
|  | gold 1/2" | 1 pound | 100 gp |


| Jewelry Workmanship Added Value |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Success | Simple | Average | Hard | Complex | Multiplex |
| Critical $^{3}$ | $\times 2^{1 / 2}$ | $\times 5$ | $\times 10$ | $\times 20$ | $\times 40$ |
| Critical $^{2}$ | $\times 2$ | $\times 4$ | $\times 8$ | $\times 16$ | $\times 32$ |
| Critical $_{\text {Sinal }}$ | $\times 1 / 2$ | $\times 3$ | $\times 6$ | $\times 12$ | $\times 24$ |
| Special | $\times 1$ | $\times 2$ | $\times 4$ | $\times 8$ | $\times 16$ |
| Normal | $\times 1 / 2$ | $\times 1$ | $\times 2$ | $\times 4$ | $\times 8$ |

wheels. These locks require lock picks to even have a chance of success. A full set of lock picks allows the character to use his skill without penalty, but having less incurs substantial penalties. For each missing or broken pick there is a cumulative 1 penalty. If there is only one missing pick then there is a 1 penalty, but if there are four missing picks then the penalty is $1+2+3$ $+4=10$. These locks usually are complexity five though a well made lock might be more.
Tumbler locks are the most difficult to pick and are very hard to make. A specially made key depresses spring loaded "tumblers" the correct amount to disengage the locking mechanism and allow the key to turn. These locks require lock picks to even have a chance of success. A full set of lock picks allows the character to use his skill without penalty, but having less incurs substantial penalties. For each missing or broken pick there is a cumulative 2 penalty. If the set is only missing one pick then that is a 2 penalty, but four missing picks increases the difficulty by 20. Most tumbler locks have a complexity of ten and they can be more difficult than that.

Screw locks are most commonly found as padlocks, though the mechanism can be used for door

| Shipwright Structure |  |  |
| :--- | :---: | :---: |
| Success | Wood | Metal |
| Critical $^{4}$ | 128 | 2187 |
| Critical $^{3}$ | 64 | 729 |
| Critical $^{2}$ | 32 | 243 |
| Critical $^{3}$ | 16 | 81 |
| Special | 8 | 27 |
| Normal | 4 | 9 |
| Miss | 2 | 3 |
| Failure | 1 | 1 |

locks and
such. The mechanism for a screw lock is in the shape of a barrel with the key entering at one end. The key is essentially a bolt which is screwed into the lock, hence the name. By screwing the key into the lock a pin is pulled back against a spring allowing the hasp or lock bolt to move. To pick a screw lock requires a different set of picks from those used with wheel and tumbler locks. It should be noted that not just any bolt will work with the screw lock-it
must have the right diameter, pitch and so on to properly engage the lock mechanism. Most screw locks have a complexity of three though they can be more difficult than that.

## Mason (A)

This craft is used to build with stone. Although this skill is sufficient for minor projects, such as a garden wall or a foundation, for an actual stone structure to be sound the work must be guided by an architect.

## Metal Engraver (A)

This craft is used to engrave patterns in metal and includes both repoussé and chasing. Both chasing and repoussé involve repeated annealing, cleaning and punch work. Pitch is used during the work to help formed cavities retain their shape. Engraving proper is cold metal work with a small chisel and removes metal from the object. Regardless of the technique employed engraving is used to produce a variety of articles ranging from decorative work on jewelry or armor to plates for use in printing.

| Task | Speed | Difficulty |
| :--- | :--- | :--- |
| Lion rampant on shield | Normal | Hard |
| Highly detailed 8 " plate | Slow | Complex |

## Miniaturist (H)

This craft is used to paint tiny pictures in great detail. It also covers the creation of paints from pigments.

## Painter (A)

This craft is used to paint signs, buildings and murals. It also covers the creation of paints from pigments.

## Perfumer (A)

This craft is used to make perfumes and incense.

## Pottery (A)

This craft is used to make things from clay whether by hand or with a potter's wheel. This skill includes the use of a kiln to fire pottery.

## Ropemaker (A)

This craft is used to make twine, rope and hausers.

## Rough Carpenter (A) [Carpenter 12]

A rough carpenter is a carpenter specializing in large structural projects such as framing and roofing.

## Scrollmaker (A)

This craft is used to make paper or parchment. Paper is made by pressing plant fibers while parchment is made by thinly scraping a leather hide.

## Sculptor (A)

This craft is used to carve stone to desired shapes. It is often used for decorative work.

## Seamstress (A)

This craft is used to take measurements, cut cloth to match a design to those measurements and stitch the final garment. It can also be used to mend garments. To make a bodice is a Simple task, but a skirt or dress is an Average task.

## Shield Maker (A) [Carpenter 12]

This craft is used to make shields. A shield may be wood slats fitted in an iron rim or made of plywood. Many shields are covered in leather and have an iron boss.

| Task | Speed | Difficulty |
| :--- | :--- | :--- |
| Round Shield | 3 days | Average |

Shipwright (H) [Boatwright 12]
A shipwright makes sailing vessels, small and large. The difficulty of the skill is determined by the size of the hull being constructed. The level of success in the effort determines the hull's structural integrity (hull points). A shipwright needs a crew to build a ship. Nine out of ten of the work crew can substitute boatwright or carpenter for shipwright, the remainder can only substitute boatwright. For structural integrity tables consult the boatwright entry. The times listed for "Speed" are considered typical but will vary significantly based on a number of factors including the size and experience of the construction crew.

| Task | Speed | Difficulty |
| :--- | :--- | :--- |
| Cargo Ship | 1 month | 41 |
| Drakkar | 3 months | 16 |
| Great Ship | 6 months | 87 |
| Sailboat | 1 month | 24 |
| Sea Elf Sloop | 1 month | 19 |
| Snekkja | 2 mon. | 11 |

## Silversmith (H) [Tinsmith 18]

A silversmith does delicate work, often highly decorative, in pewter, silver and (rarely) gold. Items crafted include goblets, necklaces, earrings, rings
and fancy tableware. As a rule of thumb the value of a given piece of jewelry is equal to twice the value of the metal making it up. Even a missed craft roll will produce an item worth this much: although it will be visually flawed it will still be functional as a piece of jewelry. The value added for workmanship is found by comparing the level of success with the difficulty of the design attempted and consulting the table. For example, a ring made from half an ounce of silver ( $11 / 2 \mathrm{sp}$ ) would have a base value of $31 / 8 \mathrm{sp}$. If it were crafted to an Average design with a normal success the total value would be $61 / 4 \mathrm{sp}$.

When setting a stone the increase in value is calculated in the same way, except the value added is relative to the gem. Thus a 5 sp ring with a 5 sp stone set with a Special success Average design would have a final value of 5 sp (the ring) +5 sp (the stone) +10 sp (the setting), or 20 sp .

A gold circlet (of Average design) weighing half a pound and set with three rubies, each worth 20 gp and in a Complex setting and all work being of a special success would be worth 50 gp (the circlet) + 100 gp (the workmanship) $+3 \times 20 \mathrm{gp}$ (the gems) + $3 \times 8 \times 20 \mathrm{gp}$ (their settings), or 690 gp .

Because of their differing densities, the relative values of otherwise identical pieces does not follow the exchange rates of money. A copper item is worth about $1 / 14$ of a silver one (and weighs slightly less) and a gold item is worth about 36 times a silver one (and weighs significantly more).

## Smelt (A)

This craft is used to extract metal from ore. Smelting takes large amounts of charcoal, about twelve pounds of charcoal to reduce one pound of ore into iron. Production of a single smelter is about one pound per hour.

## Soapmaking (A)

This craft is used to make soap, a combination of lye, tallow and salt. Soap making covers the creation of a lye from wood ash and the combining of the ingredients to make soap. The Chandler craft is used to render animal fat into tallow. Assuming the soapmaker has seperately acquired the requisite tallow the soap making process takes several days, but scales readily taking no longer to make ten pounds of soap than a single ounce. Roughly, one
pound of tallow results in one pound of soap. It is also possible to make soap from olive oil rather than tallow-this skill covers the making of soft soaps as well.

## Spinner (A)

This craft is used to make thread from wool. The wool is carded and spun into thread. It may or may not be washed.

## Stone Cutter (A)

This craft is used to quarry stones and covers various techniques for identifying rocks and quarrying them. Quarried rock is normally in rather large, rough blocks. This craft can then be used to smooth give the stone blocks their final shape.

## Swordsmith (A) [Blacksmith 18]

There are several techniques for making swords.
The better the technique the longer the process. The fastest method is simply to hammer a blade out from an iron rod, temper it, give it an edge and equip it with hilt, guard, etc. This takes around two to three hours to do right and produces a blade inferior in quality to that listed in the weapon charts. Reduce price by $30 \%$, but halve AP and HP, rounding down. Clay casing involves coating the spine of the blade with clay, firing and cooling. It is otherwise the same as the above and thus takes little more time. It produces blades of the quality assumed in the weapon charts. An equivalent quality can be achieved by having graded iron bars and welding a soft iron bar around the spine of a high carbon one. Pattern welding takes 40 to 70 hours (and as much time again to file, sharpen and otherwise finish) and involves four long, thin bars which have been carbon dusted. They are heated, twisted together, hammered flat into a single piece and tempered. This produces a candy-stripe pattern down the blade. This produces a blade that is marginally more durable (increasing HP by 10\%) and multiplies the listed price by 10 . Damascening is a technique of increasing the carbon of the blade, and thus its ability to hold an edge at the expense of being somewhat brittle. It requires a source of carbon dust and lots of tempering resulting in a manufacturing time of 40 to 70 hours and a price that is ten times that listed. HP are decreased by $10 \%$, but the damage multiplier is increased by 0.1 .

The best technique requires several rods of graded iron. These are folded, welded and tempered repeatedly forming many layers of quality steel that is both durable and, through a variation of clay casing, has a supple spine and a strong edge. HP are increased by $20 \%$ and the damage multiplier is increased by 0.1 . However, it takes months for a master to complete the difficult task and such a blade costs about 100 times the listed amount.

| Task | Time | Complexity |
| :--- | :--- | :--- |
| Simple | 3 hours | Average |
| Clay Casing | 4 hours | Hard |
| Pattern Welded | 5 days | Complex |
| Damascened | 2 months | Multiplex |
| Typical Sword | 12 hours | Average |
| Quality Sword | 15 hours | Average |
| Dagger | 5 hours | Average |
| Battleax | 15 hours | Easy |

## Tailor (A)

This craft is used to take measurements, cut cloth to match a design to those measurements and stitch the final garment. It can also be used to mend garments. To make a tunic is a Simple task, but a shirt or trousers is an Average task.

## Tanner (A)

This craft involves using some nasty chemicals to treat raw hide making it suitable for use.

## Tatooing (A)

This craft is used to make or touch up tatoos.

## Tinsmith (A)

A tinsmith makes and repairs tin and copper pots, pans and kettles.

## Trimmer (A) [Carpenter 12]

A trimmer is a carpenter specializing in molding and trim such as foor doors, and windows.

## Weaponsmith (A)

A weaponsmith brings an understanding of weapon balance, reach, stresses and the like to other crafts. As such it does not stand on its own, but is a requirement to make proper weapons. When a craftsman makes a weapon he uses the lesser of the base skill, usually Craft Blacksmith and/or Craft Wood Carver, and Craft Weaponsmith.

## Weaver (A)

## Elementalis!

Although considered a form of magic and thus susceptible to being detected and dispelled the practice of elementalism is not like that of the spell caster. The elementalist has a talent that allows her to use her chi to manipulate an element, typically earth, air, fire or water. The use of this talent is tiring and fatigues the practitioner.

Directing the chi is greatly assisted by physical activity and so gestures are an integral part of the art. Not only are some of the movements suggestive of martial arts techniques but there seems to be a deeper, more subtle connection. The swiftness of the wind connects with the movement of kung-fu, the flowing of water with the blending of aikido, the aggression of fire with taekwondo and the solidity of earth with the stances of shaolin. Consequently there is a certain amount of overlap between practitioners of elementalism and those martial arts.

The amount of power an elementalist can exert depends on distance, POW and skill in the elementalist skill in question. The maximum amount of elementalist power, abbreviated ePOW, is equal to POW plus elementalist skill score. The elementalist may choose to not exert herself to the full extent possible. ePOW drops off with distance in the same way as presence and when adjusted for distance is referred to as effective ePOW. If the elementalist has a meditative focus on channeling for the element then the effective ePOW are multiplied by Channel skill rank plus one, though never above the maximum ePOW of POW plus skill score.

An elementalist is fatigued by exerting her powers. Each use of a technique incurs FP equal to one fifth the ePOW exerted. This is reduced by her skill rank in the element so an elementalist with POW 15 and Water Elementalism 18 can exert up to ePOW 33 for $33 / 5$ FP. Fractional FP accumlate, but when considering their effect are rounded to the nearest whole FP. So if $33 / 5$ FP are exerted the elementalist is considered to have accrued 4 FP , but on a second exertion the total accrued is only 7 FP .

Note that reductions cannot take the FP cost for a technique to zero. If the FP cost would be reduced to zero or less it is considered to be $1 / 5 \mathrm{FP}$. For
example, an elementalist with Air Elementalism 12 and POW 12 knowing the Lightning technique can get a bonus of +1 to SR by exerting ePOW 10 in Lightning. This has a nominal cost of 2 FP, but due to skill has a reduction of 2 FP. Every fifth round she exerted ePOW 10 would incur 1 FP.

## Techniques

The practice of elementalism is divided into a variety of techniques. As a practitioner developers her art she progresses in a particular direction. For a practitioner to fully develop the art in all its variations requires starting over again. Though possible this is rarely done as few have the patience to endure the basics a second time.

As techniques are peculiar to a given element they are grouped by element, though listed alphabetically within each element. To learn a technique the elementalist must know any and all prerequisite techniques and have attained the indicated skill rank. Upon attaining each skill rank and receiving the required training the elementalist gains a number of points to learn techniques as indicated on the table.

## Air

The techniques of air elementalism are characterized by movement and speed. Though not as inherently aggressive as fire they are of substantial use in combat and air elementalists who practice kung-fu are dangerous opponents.

## Some Technique

some header
Some text

## Feather Fall

## Rank 2 [?]

This technique slows the fall of the elementalist, reducing the effective height of the fall by exerted ePOW. This technique can be applied once per fall per round. That is, it could be exerted twice in a round for two different falls, or twice in two rounds for a fall that started in one and continued to the following round.

## Float

## Rank 3 [Feather Fall]

This technique allows the elementalist to float and drift in the air. It can only be exerted once per round
and allows up to adjusted ePOW continuous movement strike ranks of floating. To float for an entire round requires exerting ePOW 55.
Fly
Rank 4 [Float]
This technique allows the elementalist to fly for adjusted ePOW continuous movement strike ranks and can only be used once per round. She has whatever Mv she used in her last SR on the ground.

## Free Run

Rank 3 [Sprint]
This technique allows the elementalist, while running, to run up walls and across ceilings. The slowest she can move and still do this is equal to Mv 50 minus exerted ePOW. Thus an elementalist exerting ePOW 20 would have to use Mv 30 to do so. This technique is often combined with sprint to get sufficient speed. Note that a powerful elementalist who exerts ePOW 50 can run up to the ceiling and stop, hanging there, as no movement would be required.

## Haste

Rank 3 [Lightning]
This technique allows the elementalist to concentrate her chi such that the time required to complete one action is reduced by 1 SR for every full 10 ePOW exerted. The time for an action cannot be reduced to zero. If it would be reduced to zero or less (that is, at least ePOW 40 is exerted) then the action becomes "reflexive" and its performance does not preclude performing another action in the same strike rank. FP are paid for every action which has its time reduced. So if an elementalist with Air Elementalism 12 and POW 15 throws knives and exerts ePOW 20 in this technique she can draw a new knife to throw by fast drawing it (1 FP) to reduce the time to 2 SR , then this technique reducing it by another 2 SR (and costing 2 FP ), and snapshot throw one knife every strike rank throughout the round-but spending 3 FP each time she drew a knife.

## Lightning

Rank 1
This technique allows the elementalist to focus her chi such that she is able to initiate action more
rapidly, effectively increasing her strike rank by one for every ten full ePOW exerted.

## Sprint

## Rank 1

This technique allows the elementalist to move more quickly, increasing her Mv by ePOW for the round.

## Stun Blow

## Rank 3 [Wind Breath]

This technique projects the elementalist's chi as a breath of such force that it can physically stun what it strikes. To hit with this in combat requires Target, and does stun damage for an adjSTR equal to effective ePOW.

## Wind Breath

## Rank 1

This technique projects the elementalist's chi as a wind blowing from her mouth. The force of the wind so generated is rated with STR equal to effective ePOW and can, with Target, be directed against a target in combat to bowl them over or knock them back. Such an attack does knockback damage for adjSTR equal to effective ePOW.

## Earth

The techniques of earth elementalism are characterized by solidity and strength. They are defensive as well as offensive making this a well rounded art.

## Some Technique

some header
some text

## Popup Rock

Rank 3 [Pushup Rock]
Range: ranged
Duration: instant
Target: location
Area: one hex
This technique consists of stomping the ground resulting in a rock popping up to about chest level. The STR of the force lifting the rock is equal to

## Pushup Rock

Rank 1
Range: ranged
Duration: instant
Target: location

Area: one hex
This technique consists of stomping the ground resulting in rock pushing up in the targeted hex. The STR of the force lifting the rock is equal to the elementalists PRE in the targeted location.

## Fire

The techniques of fire elementalism are characterized by restrained violence. They are inherently offensive making this art of great use in combat and fire elementalist taekwondo practitioners are dangerous.

## Some Technique

some header
some text

## Project Fire

Rank 1
Range:
Duration: one round
Target:
Area:
This technique generates fire from the elementalist's projected chi.

## Water

The techniques of water elementalism are characterized by peace and cooperation. Though the art has capacity for warfare that is not its stength and with a philosophy so compatible with aikido there is no wonder that some choose to practice both arts.

## Some Technique

some header
some text

Tim Doty

| Effective Elementalist Power at Distance |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ePOW | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |  |  | 15 | 16 | 17 |
| 1 | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2 | - | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 3 | 1 | - | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 4 | 1-3 | - | - | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 5 | 2-4 | 1 | - | - | 0 | - | - | - | - | - | - | - | - | - | - | - | - |
| 6 | 2-7 | 1 | - | - | - | 0 | - | - | - | - | - | - | - | - | - | - | - |
| 7 | 3-9 | 1,2 | - | - | - | - | 0 | - | - | - | - | - | - | - | - | - | - |
| 8 | 4-12 | 2, 3 | 1 | - | - | - | - | 0 | - | - | - | - | - | - | - | - | - |
| 9 | 4-16 | 2, 3 | 1 | - | - | - | - | - | 0 | - | - | - | - | - | - | - | - |
| 10 | 5-19 | 3, 4 | 2 | 1 | - | - | - | - | - | 0 | - | - | - | - | - | - | - |
| 11 | 6-24 | 3-5 | 2 | 1 | - | - | - | - | - | - | 0 | - | - | - | - | - | - |
| 12 | 8-28 | 4-7 | 2, 3 | 1 | - | - | - | - | - | - | - | 0 | - | - | - | - | - |
| 13 | 9-33 | 4-8 | 2, 3 | - | 1 | - | - | - | - | - | - | - | 0 | - | - | - | - |
| 14 | 10-39 | 5-9 | 3, 4 | 2 | 1 | - | - | - | - | - | - | - | - | 0 | - | - | - |
| 15 | 12-44 | 5-11 | 3, 4 | 2 | - | 1 | - | - | - | - | - | - | - | - | 0 | - | - |
| 16 | 13-51 | 6-12 | 4, 5 | 2, 3 | - | 1 | - | - | - | - | - | - | - | - | - | 0 | - |
| 17 | 15-57 | 7-14 | 4-6 | 3 | 2 | 1 | - | - | - | - | - | - | - | - | - | - | 0 |
| 18 | 17-64 | 8-16 | 4-7 | 3 | 2 | - | 1 | - | - | - | - | - | - | - | - | - | - |
| 19 | 18-72 | 8-17 | 5-7 | 3, 4 | 2 | - | 1 | - | - | - | - | - | - | - | - | - | - |
| 20 | 20-79 | 9-19 | 5-8 | 4 | 3 | 2 | - | 1 | - | - | - | - | - | - | - | - | - |
| 21 | 22-88 | 10-21 | 6-9 | 4, 5 | 3 | 2 | - | 1 | - | - | - | - | - | - | - | - | - |
| 22 | 25-96 | 11-24 | 6-10 | 4, 5 | 3 | 2 | - | 1 | - | - | - | - | - | - | - | - | - |
| 23 | 27-105 | 12-26 | 7-11 | 5, 6 | 3, 4 | 2 | - | - | 1 | - | - | - | - | - | - | - | - |
| 24 | 29-115 | 13-28 | 8-12 | 5-7 | 4 | 3 | 2 | - | 1 | - | - | - | - | - | - | - | - |
| 25 | 32-124 | 14-31 | 8-13 | 5-7 | 4 | 3 | 2 | - | - | 1 | - | - | - | - | - | - | - |
| 26 | 34-135 | 15-33 | 9-14 | 6-8 | 4, 5 | 3 | 2 | - | - | 1 | - | - | - | - | - | - | - |
| 27 | 37-145 | 17-36 | 9-16 | 6-8 | 4, 5 | 3 | - | 2 | - | - | 1 | - | - | - | - | - | - |
| 28 | 40-156 | 18-39 | 10-17 | 7-9 | 5,6 | 4 | 3 | 2 | - | - | 1 | - | - | - | - | - | - |
| 29 | 42-168 | 19-41 | 11-18 | 7-10 | 5,6 | 4 | 3 | 2 | - | - | 1 | - | - | - | - | - | - |
| 30 | 45-179 | 20-44 | 12-19 | 8-11 | 5-7 | 4 | 3 | - | 2 | - | - | 1 | - | - | - | - | - |
| 31 | 48-192 | 22-47 | 12-21 | 8-11 | 6,7 | 4, 5 | 3 | - | 2 | - | - | 1 | - | - | - | - | - |
| 32 | 52-204 | 23-51 | 13-22 | 8-12 | 6,7 | 4, 5 | - | 3 | 2 | - | - | - | 1 | - | - | - | - |
| 33 | 55-217 | 25-54 | 14-24 | 9-13 | 6-8 | 5 | 4 | 3 | 2 | - | - | - | 1 | - | - | - | - |
| 34 | 58-231 | 26-57 | 15-25 | 10-14 | 7-9 | 5,6 | 4 | 3 | - | 2 | - | - | 1 | - | - | - | - |
| 35 | 62-244 | 28-61 | 16-27 | 10-15 | 7-9 | 5,6 | 4 | 3 | - | 2 | - | - | - | 1 | - | - | - |
| 36 | 65-259 | 29-64 | 17-28 | 11-16 | 8-10 | 6,7 | 4, 5 | - | 3 | 2 | - | - | - | 1 | - | - | - |
| 37 | 69-273 | 31-68 | 17-30 | 11-16 | 8-10 | 6,7 | 5 | 4 | 3 | - | 2 | - | - | - | 1 | - | - |
| 38 | 73-288 | 32-72 | 18-31 | 12-17 | 8-11 | 6,7 | 5 | 4 | 3 | - | 2 | - | - | - | 1 | - | - |
| 39 | 76-304 | 34-75 | 19-33 | 12-18 | 9-11 | 7, 8 | 5, 6 | 4 | 3 | - | 2 | - | - | - | 1 | - | - |
| 40 | 80-319 | 36-79 | 20-35 | 13-19 | 9-12 | 7, 8 | 5,6 | 4 | - | 3 | - | 2 | - | - | - | 1 | - |
| 41 | 84-336 | 38-83 | 21-37 | 14-20 | 10-13 | 7-9 | 6 | 4, 5 | - | 3 | - | 2 | - | - | - | 1 | - |
| 42 | 89-352 | 40-88 | 22-39 | 14-21 | 10-13 | 8,9 | 6,7 | 5 | 4 | 3 | - | 2 | - | - | - | - | 1 |
| 43 | 93-369 | 41-92 | 23-40 | 15-22 | 11-14 | 8-10 | 6,7 | 5 | 4 | 3 | - | 2 | - | - | - | - | 1 |
| 44 | 97-387 | 43-96 | 25-42 | 16-24 | 11-15 | 8-10 | 6,7 | 5 | 4 | - | 3 | - | 2 | - |  | - |  |
| ePOW | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |  | 14 | 15 | 16 | 17 |

## Tim Doty

## Herbalism

Because of the complexity of herbalism the full description and use occupies this chapter rather than clutter its entry under Mental skills. Essentially, the Herbalism skill allows the character to recognize herbs and fungi and identify them for various uses. But in addition to that it covers all manner of herbal uses through poultices, teas, decoctions, and so on.

The principle purpose of an herbalist is that of health provider. Although they do not supplant medicine and doctors they supplement them and many other professions, such as midwifery. What an herbalist does is diagnose physical (and even emotional or mental) disorders or ailments and formulate a treatment to eliminate, counter or lessen the observed problems.

The specific uses are varied, but include pain relief, improved respiration, digestion aid, strengthen and regularize heart beat, antiseptic, increased perspiration and reduced muscular spasms. Basically any organ of the body can be affected and any physiological response can be produced.

## Using Herbs

Herbalism can be used to produce generic or targeted treatments. To produce a generic treatment requires only a quantity of the herbs represented by the formula. For a targeted treatment the herbalist must not only have the required herbs, but also be able to examine and diagnose the patient or have access to detailed and accurate medical records.

If the herbs are not well organized and labeled there is more chance for a mishap and the selection process will generally take longer. The exact penalty is up to the referee, but in the worst case (herbs are separated, but not organized or labeled) the time is increased by a factor of six and a penalty of 20 to the Herbalism skill is levied.

## Generic Treatments

To create a generic treatment the herbalist prepares the herbs, which generally takes a minute to do, and creates the selected form of treatment. Creating the treatment takes an amount of time as indicated on
the Treatment Summary table. For example, to create a tea for abating a fever would require one ounce of Abate Fever herbs, a pint of boiling water, a pot for boiling the water in, a container for the resultant tea and five minutes of steeping time for the tea.

## Targeted Treatments

To create a targeted treatment the herbalist must have a broad selection of herbs to choose from as most appropriate for the patient. The diagnosing and selection process generally takes fifteen minutes, less the skill level of the herbalist. After that has been done the formula is prepared in accordance with the chosen form of treatment just as for generic treatments.

The smaller the selection of the necessary herbs the more difficult it is to optimize the formula for the target. The Herb Selection table is used to determine the modifier, if any, to the Herbalism skill roll for lack of selection.

| Herb Selection |  |  |
| :--- | :---: | :---: |
| Selection | At least | Penalty |
| Good | 1 pound | - |
| Fair | 8 ounces | $-10 \%$ |
| Poor | 4 ounces | $-25 \%$ |
| Pathetic | 2 ounces | $-75 \%$ |

## Potency

The potency of the treatment is determined by the level of success with the Herbalism skill. This is found by consulting the Herbal Potency table using the appropriate column, either Targeted or Generic. A failure indicates that the herbalist has inadver-

| Herbal Potency |  |  |
| :--- | :---: | :---: |
| Success | Targeted | Generic |
| Critical $^{3}$ | $4 \mathrm{~d} 10+40$ | 6 d 6 |
| Critical $^{2}$ | $3 \mathrm{~d} 10+30$ | 5 d 6 |
| Critical $^{2}$ | $2 \mathrm{~d} 10+20$ | 4 d 6 |
| Special | $1 \mathrm{~d} 10+10$ | 3 d 6 |
| Normal | $1 \mathrm{~d} 6+4$ | 1 d 6 |
| Miss | 1 d 4 | 1 d 6 |
| Failure | - | - |
| Fumble | $(1 \mathrm{~d} 20)$ | $(1 \mathrm{~d} 20)$ |
| Fumble $^{2}$ | $(2 \mathrm{~d} 20)$ | $(2 \mathrm{~d} 20)$ |
| Fumble $^{3}$ | $(3 \mathrm{~d} 20)$ | $(3 \mathrm{~d} 20)$ |

tently done something in the selection or preparation process to eliminate any herbal potency. In the case of a fumble the herbalist confused one herb for another and the effect will be something other than desired.

It is important to note that with most herbal formulae doubling the dosage does not double the potency. Too much of a good thing can become bad, and even too much of a bad thing doesn't necessarily make it worse-the body may just reject it the faster and with less repercussion. If for some reason a double (or triple or more) dose is given what happens is up to the referee, but the effects should be lessened or, if being used medicinally, treated as if the patient were healthy and having an adverse effect. To provide a continuing effect keep in mind that herbs act on the system for four to eight hours after ingestion.

The exception to this is overdosing to compensate for lost potency. Up to the original potency can be restored by overdosing, any additional potency is either lost or becomes counterproductive. For example, an ointment that was originally potency six was made in a one-quart quantity (four doses). Three months later each dose is only potency three-so by doubling the doses up the original potency is "restored."

## Organization

It is generally assumed that an herbalist has their herbs well organized and labeled. If this is not the case it will take substantially longer to locate the desired herbs and the chances of a mishap increase. Assessing such a penalty is by necessity up to the referee, but it can easily run up to 20 if the herbalist must identify each herb as she goes along. The time will generally increase from five minutes to half an hour or longer.

## Storing Herbs

Although herbs can be used fresh, often it is necessary to store them for later use. Simple storage involves drying the herbs which must be done in a shady and airy place-heat removes the essences which makes the herbs useful so passive drying through evaporation is the only way.

Roots and heavy, succulent stems are more difficult due to their increased moisture content and require a slight application of heat to dry. It is up to the referee to determine how much detail to go into for herb storage. As a rule of thumb it takes eight hours to dry any quantity of herbs given sufficient space.

Herbs are best stored in opaque containers that can be sealed to prevent moisture from reaching the contents. These containers should then be kept in a cool, dry, dark place.

The herbal remedies are also best stored in tightly closed opaque containers in a cool, dry place. The listed rates for loss of potency over time assume that this is the case. Improperly stored remedies lose potency at a much faster rate. In the worst case, where the remedy is left uncovered and exposed, potency is lost at 100 times the normal rate. This is why tea loses potency so fast-if it were treated like an infusion and stored as such it would retain potency much better.

## Forms of Treatment

There are several different forms in which herbal concoctions come. For each herbal recipe a specific form is listed. The amounts of herbal materials listed assume dried and stored herbs. For fresh herbs double the amount-the dried herbs have lost some essence, but are more condensed by virtue of having less water content.

| Formula Summary |  |  |  |  |
| :--- | :---: | :--- | :--- | :---: |
| Form | Herbs | Other Materials | Time | Doses |
| Decoction | 1 oz. | 1 pint cold water | 30 minutes | 2 |
| Infusion | 8 oz. | 1 gallon hot water | $1+$ hours | 8 |
| Oil | 2 oz. | 1 pint olive oil | 3 days | 2 |
| Ointment | 1 oz. | $3 / 4$ pound fat | 30 minutes | 1 |
| Syrup | 2 oz. | 1 quart water | 2 hours | 2 |
| Tea | 1 oz. | 1 pint hot water | 5 minutes | 1 |
| Tincture | 4 oz. | 1 pint alcohol | 2 weeks | 8 |

## Bath

An herbal bath is a way to give a massive dosage of an herb using the entire body to soak it up so as to avoid an adverse reaction. An infusion or decoction made from half a cup of herbal material which is then added to the bath water gives the bath its potency. The bath should be warm to hot, but not overly hot as this has various, harmful effects.

## Compress

A compress is used to apply an herbal tea externally. A towel is soaked in the tea, wrung out, laid on the desired location and covered with a dry towel. The compress should be replaced every five minutes or so as it cools off. Usually a compress must be applied for 30 minutes to be effective.

## Decoction

A decoction is used to extract herbal essences from heavy materials like roots and involves simmering the herbal material, tightly covered, for thirty minutes. One ounce of herbal material is used per pint of water which are combined cold and then brought to a simmer. Decoctions are best stored in opaque bottles which have a tight seal.

## Infusion

An infusion is made for later use and generally involves half a pound of herbal material per gallon of hot water. The brewing is done over a long period, usually one or more hours, and should be done covered to prevent the herbal essences from escaping. Infusions are best stored in opaque bottles which have a tight seal.

## Poultice

A poultice is used to apply an herbal paste externally. The paste itself is made by combining one ounce of herbal matter with one cup of tea and a

|  | Formula Potency |  |  |
| :--- | :---: | :---: | :--- |
| Form | Dosage | Initial | Loss while stored |
| Decoction | 1 cup | - | -1 per 2 days |
| Infusion | 1 pint | +1 | -1 per day |
| Oil | 1 cup | - | -1 per week |
| Ointment | 1 cup | - | -1 per month |
| Syrup | 1 cup | - | -1 per 2 days |
| Tea | 1 pint | - | -1 per 15 minutes |
| Tincture | $1 / 4$ cup | - | -1 per 2 months |

cup of oatmeal. This paste is then applied to the desired location and covered with a warm cloth.

## Plaster

A plaster is used to apply an herbal paste externally. The paste itself is made by combining one ounce of herbal matter with one cup of tea and a cup of oatmeal. This paste is then applied to a cloth which is folded so that none of the paste is showing and placed on the desired location. An herbal paste is usually prepared on the spot as they don't retain potency for very long.

## Oil

An oil is used to concentrate the herbal essence and is good for storage. Two ounces of herbal material are combined with one pint of olive oil and set in a warm place for three days after which the oil is strained and stored. Oils are best stored in opaque bottles which have a tight seal.

## Ointment

An ointment or cream is good for later external application and is made by simmering one ounce of herbal material in $3 / 4$ pound of fat. After 30 minutes or so the fat is strained and allowed to set. Sometimes one or two ounces of beeswax is added before cooling to make it thicker. Ointments and creams are best stored in opaque bottles which have a tight seal.

## Syrup

An herbal syrup is made by combining two ounces of herbal material with one quart of water in a covered pot and boiling that down to one pint of fluid-this takes about two hours. Two tablespoons of honey are then mixed in to make the syrup. Syrups are best stored in opaque bottles which have a tight seal, kept in a cool place.

## Tea

A tea is made for on-the-spot uses and generally involves one ounce of herbal material per pint of hot water. The brewing usually takes only five minutes and should be done covered to prevent the essences from escaping. Herbal teas have very strong flavors, much more so than normal drinking teas which are
 generally of $1 / 8$ the potency.

## Tincture

A tincture is a way to concentrate and preserve herbal essences by combining four ounces of herbal material with one pint of drinking alcohol in a tightly covered bottle. The bottle is shaken several times daily over a two week period after which the alcohol is strained and stored. Tinctures are best stored in opaque bottles which have a tight seal.

## Herbal Formulae

There are many different ways to use herbs and some few of these are detailed here. If the referee desires to add more herbal formulae then this list can serve as a guide. Each description lists the rarity of the herbs employed and the potency modifier.

The form of preparation affects the potency. The base line is for tea. Infusions are somewhat more potent, but are not usually consumed immediately. Decoctions are even more potent and tinctures are very potent indeed.

Whether ingested or applied externally the herbal formula is not effective until 30 minutes after its use. Some effect from the formula is usually felt well before then, but is ultimately of no significance. Unless specified otherwise, herbal formulae begin to lose potency 45 minutes after ingestion at the rate of one point every fifteen minutes. Six hours after ingestion the potion will no longer have any effect, regardless of its potency at that time.

Abate Fever
Common Herbs

## Potency $\times 1$

If given to someone with a fever the herbs will lower the fever, effectively adding the potency to the patient's CON. If given to a healthy individual the effect is to drop the victim's metabolism and body heat to dangerously low levels with potency matched against CON. A critical success means that the victim's CON is temporarily reduced by the potency, a special success means that the victim's CON is reduced by half potency and a normal

success that the reduction is one quarter potency. If CON is reduced to a negative value then that negative amount is a permanent reduction to CON. If CON drops below one then the character is unconscious and shows no sign of life. Temporary loss of CON is recovered at the rate of one point per hour.

## Abortive

Common Herbs (Uncommon)
Potency $\times 3 / 4\left(\times 1^{1 / 2}\right)$
Causes a pregnant woman to abort if POT/CON is a success. However, she takes abdominal damage for adjSTR equal to length of term in months, squared. This is dangerous to use in the third trimester. The more potent herbal concoction is even harsher and has its adjSTR doubled.

## Aphrodisiac

Rare Herbs (Very Rare)
Potency $\times 1(\times 2)$
Causes sexual arousal if patient fails a CON vs. potency roll.

## Cleanse

Common Herbs (Infrequent)
Potency $\times 1 / 2\left(\times 1^{1 / 2}\right)$
Useful for cleansing wounds and the like to help prevent or kill an infection.

## Constipate

## Common Herbs

Potency $\times 1 / 2$
Used to help stop up a patient losing excessive amounts of fluid to diarrhea the potency is added to the patient's CON. When given to a healthy individual the potency is matched against the victim's CON. A critical success indicates that the victim is bound up for 24 hours, a special success indicates 16 hours and a normal success indicates 8 hours. If such a condition continues it will have a deleterious effect on the victim's health-CON will be reduced by one point per day. Once normal functions return this loss is recovered at the rate of one point every four hours.


## Contact Poison

Rare Herbs
Potency $\times 1$
Usually made as a cream or thickened syrup and spread on the edge of a blade, but also effective on door knobs, substan-
 tial contact (such as grasping and pulling a door knob, or having the skin broken by a blade) results in the potency being matched against the victim's CON. Note that this takes place after one minute instead of the normal half hour.

A critical success does twice potency points of damage, a special success does potency points of damage and a normal success does half potency points of damage. A miss does one-quarter potency points of damage, a failure does a single point of damage, and a fumble has no effect. If ingested potency is doubled. Damage is done over a thirty minute period.

## Cramping <br> Common Herbs

Potency $\times 1 / 2$
Causes abdominal discomfort from cramping of a severity and duration determined by the level of success in matching potency against the victim's CON. A critical success results in cramps so severe that they cause potency pain points for an hour and half that for an additional four hours. A special success results in cramps having potency pain points for fifteen minutes and half that for the remainder of an hour with one pain point for four more hours. A normal success causes potency pain points for a minute, half that for another four minutes and one pain point for an hour. A miss causes mild discomfort (one pain point) for fifteen minutes.

## Curative

Infrequent Herbs
Potency $\times 1 / 4$
Restores potency points of damage after a week's use three times daily.


## Ease Gas

Common Herbs
Potency $\times 1 / 2$
Relieves gas cramps by helping the patient's body expel it.

## Ease Pain

## Common Herbs (Uncommon)

Potency $\times 1 / 3(\times 3)$
Reduces severity of pain by a number of damage levels equal to potency. This effect lasts for 1 to 2 hours. If potency equals or exceeds the patients CON the patient experiences euphoria. At twice the patients CON the patient is effectively incapacitatedthe altered state prevents the patient from taking any effective action. At triple the patient's CON the patient is knocked out and must make a CON/potency roll to avoid the ill effects of an overdose.

| Success | Result <br> Miss |
| :--- | :--- |
| Patient throws up when the herbs wear <br> off (incapacitated for 1d6 rounds) <br> Patient is sick (incapacitated) for 1d6 |  |
| Failure | Paninutes after the herbs wear off <br> minble |
| Patient is sick (incapacitated) for 1d6 <br> hours after the herbs wear off |  |
| Fumble $^{2}$ | Patient goes into a state of shock |
| Fumble $^{3}$ | Patient dies (almost dead) |

## Hallucinogenic

Infrequent Herbs (Rare)
Potency $\times 1(\times 3)$
Causes visual and aural hallucinations. Depending on the herbs and person may cause euphoria as well. The patient matches their CON against the potency with the result determin-
 ing how frequent and vivid the hallucinations are. Generally, a hallucinating character will have a penalty to actions of $5 \%$ for a miss, $10 \%$ for a failure and $15 \%$ for a fumble.


Healing<br>Rare Herbs (Very Rare)<br>Potency $\times 1 / 2(\times 1)$

Restores potency points of damage over a four hour period.

## Laxative

## Common Herbs

Potency $\times 1$
If given to an ill or afflicted patient who needs this treatment the potency adds to CON. On the other hand if it is given to a healthy individual the potency is matched against CON to see if a bowel movement is induced. A critical success indicates that the victim has the runs for half an hour, a special success indicates that the victim has the runs for five minutes and a normal success that the victim has a bowel movement as soon as the herbs take effect.

## Potion

## Very Rare Herbs

## Potency $\times 1$

Holds a spell that is cast into it. The spell becomes available thirty minutes after drinking the potion and can be released at any time before six hours from drinking at which time the spell dissipates. The
 maximum spell level which can be held is equal to the total potency of the potion fluid in the container when the spell is cast. The spell loses levels as the potion loses potency. Forty-five minutes after ingestion the spell begins to lose potency at the rate of 1 point every fifteen minutes. If a potion that has a spell cast into it is divided then the spell levels are apportioned between the parts. Interpreting the effect of lost spell levels is at all times up to the referee.

Usually potions are made as tinctures with a potency much higher than the spell to be cast into them to maximize the time before spell levels begin to dissipate.


## Relax Muscle

Infrequent Herbs
Potency $\times 1 / 2$
Causes tense muscles to relax which is especially useful in easing tightly knotted muscles.

## Stimulant

## Common Herbs (Rare)

Potency $\times 1 / 3(\times 1)$
Normally given to a weak patient to help restore life and vigor to fight some disease or affliction, in which case potency is added to CON for this purpose. If given to a healthy person can over stimulate the heart leading to an irregular heart beat and hypertension. Potency is matched against the victim's CON.


A critical success indicates that the victim's heart was unable to take the strain and stopped. A special success indicates that the victim suffers heart failureCON is permanently reduced to half original and the victim is in a weakened state for one week. A normal success indicates that the victim is incapacitated for one day and CON is permanently reduced by one point. A miss indicates that the victim's heart flutters and END is halved for six hours.

## Systemic Poison

Uncommon Herbs

## Potency $\times 1$

Once effective, and every half hour for the next six hours thereafter if ingested, potency is matched against the victim's CON. A critical success does 3 damage, a
 special success does 2 damage and a normal success does 1 point of damage. A miss only makes the victim feel queasy, a failure has no effect and a fumble means that the victim's body successfully rejects the poison causing vomiting-but eliminating the need for further rolls.


## Trance Inducing

Uncommon Herbs (Rare)
Potency $\times 1(\times 3)$
The effect of this herb is to induce a trance, the depth of which is based on the potency and the mental/emotional state of the character ingesting it. The typical use of this herbal is to induce a trance in either a shaman or her apprentice.

Normally the potency is resisted by the character's CON, but if the character is relaxed and receptive then the potency is resisted by one. If, on the other hand, the character is actively trying to resist the effects of the herbal the potency is resisted by CON + WIL.

A critical success means that the herbal affects the character so strongly that her spirit is dissociate from her body and knocked clear into the spirit world. Getting back can be a problem for a nonshaman who is unable to move between the physical world and the Outer realm of the spirit world.

A special success dissociates the spirit from the body leaving the character's awareness outside of it in a manner similar to astral projection. The body cannot be re-entered until the effects of the herbal have worn off. If a character does not possess Astral Projection as a skill then they can slowly float along at about one hex (five feet) per round. Though they can pass through solid objects they will immediately lose all sense of direction upon entering an object or solid region. The character is floating and has no sense of up or down, left or right, forward or backward. They are a formless, shapeless spirit.

A normal success puts the character into a trance state so deep they are lost within themselves and are subject to visions which can be clairvoyant or prescient in nature. A miss means that the character falls into a mild trance and is very suggestiblenormal boundaries and constraints disappear, hough the character will still be unlikely to do anything which is completely against her nature. A character in such a mild trance who attempts to

achieve a meditative state gets a bonus of 5 to the effective skill level.

A failure means that the herbal has no effect and a fumble that the character loses 1d6 FP from the mental, emotional and spiritual stress of the herbal, though nothing else happens.

## Vomiting Agent

## Common Herbs

## Potency $\times 1$

Used to encourage an ill or afflicted person to vomit as part of the recovery process-in which case potency is added to CON. If given to a healthy individual potency is matched against CON to determine if vomiting is induced. A critical indicates that the victim heaves for half an hour emptying his stomach, a special that he vomits for five minutes (not continuously) and a normal success that he vomits once. In any of these cases the victim will remain nauseous for an hour afterwards.

## Warming <br> Common Herbs (Rare)

Potency $\times 1 / 2(\times 1)$
If given to an ill or afflicted patient who needs internal heat this treatment adds potency to CON. If given to a healthy individual potency is matched against CON. A critical success indicates that the victim suddenly fevers, being severely confused (suffers a -10 penalty to actions) by it for eight hours and taking one point of damage every fifteen minutes. A special success indicates that the victim suddenly fevers and is greatly confused for six hours, taking one point of damage every half hour and suffering a -6 penalty to actions. A normal success indicates that the victim suddenly fevers and is confused for four hours, taking one point of damage every hour and suffering a -2 penalty to actions. A miss indicates that the victim fevers for two hours, but suffers no particular adverse effect.


## Tim Doty

## Dyeing

A possible source of money for the practicing herbalist is identifying herbs for the dyeing of cloth. Although the subject is complicated, for game purposes an herbalist can produce yellows, greens, oranges, browns, and tans suitable for clothing and even reds, purples and blues-though these last without color durability.

Although the colors are produced with herbs they are set in the wool by a chemical treatment available from an alchemist. The chemicals, called mordants, must be obtained and used at the same time as the dyes.

If a player chooses to make money through this it is up to the referee to determine the economics of the situation - they are beyond the scope of these rules.

## Hyprotism

The basic function of hypnosis is the creation of a trance state. It is the use to which this trance state is put that defines hypnosis and there are, essentially, three purposes. The first and most common is to allow questioning of the subject. The second is to implant suggestions and the third is to do it simply for the sake of the relaxation and clarity that comes with the trance state. The first step is to induce the trance.

## Entrancing

The subject of the hypnosis is most important: it is rather difficult, though not impossible, to hypnotise oneself. The real difficulty comes later in that someone in a trance is passive and so unable to give themself directives. An attempt at self hypnosis has a penalty of $25 \%$.

If the subject is someone else it must be considered whether they are amenable to the hypnosis. In principle anyone can be hypnotized, but in practice it is very difficult to work with an unwilling subject. Inducing the trance through some compelling means (i.e., magic) makes more sense. Any attempt to hypnotize an unwilling subject has a penalty equal to the subject's WIL $\times 5 \%$.

Visual fatigue is an aid in inducing a hypnotic trance. This can be achieved by having the subject stare at a candle, although repetitive eye motionlike following the swing of a pendulum, can be effective as well. The use of a candle gives a bonus of $25 \%$, that of a pendulum $10 \%$. If the subject fails to cooperate by staring at the candle or pendulum there is no bonus. A mild sedative, or general fatigue, can also give a bonus though care must be taken to not simply put the subject asleep.

Each attempt at hypnosis takes one minute at the end of which the hypnotist rolls against his adjusted skill. The level of success with consecutive attempts is cumulative. Every five levels of success represents a successively deeper trance. If the level of success ever drops below zero the attempt fails and cannot be retried for five minutes per level of success below zero that resulted. Thus if the first roll was a triple fumble it would be 20 minutes
before the hypnosis could be reattempted.
A trance lasts until the hypnotist releases the subject from it, the subject breaks out of it or the hypnotist abandons the subject for too long. The subject can attempt to break a trance at the end of each round. To do so requires a WIL/trance level roll where trance level is the number of levels of success in the trance. The roll is either immediately successful or not, though it will take the subject a number of rounds to become fully present and aware equal to the depth of the trance less the level of success achieved in the WIL roll. Thus a critical success will bring a character from a deep trance to full waking consciousness instantly.

A subject left to his own devices will drift out of a trance in a number of minutes equal to the level of

## Hypnotic Trance

Depth Levels
15 Description

Light or shallow trance. Subject has normal awareness of her surroundings. memory functions normally. Increase Meditation skill level by 3 .
Medium or normal trance. Subject is only peripherally aware of her surroundings (passive perception rolls only for environment). Memory is enhanced. Increase Meditation skill level by 5.

Deep trance. Subject is not aware of her surroundings, though physical contact is still sensed. Superficial access to the subconscious mind.
Deeper trance. Subject is not aware of her surroundings and only peripherally aware of physical contact (rough handling required to gain attention). Most of the subconscious is available.
Deepest trance. Subject is oblivious to her surroundings, though still able to hear the voice of the psychic. The subconscious is completely available.
the trance.

## Questioning

When someone is in a hypnotic trance the altered state prevents them from lying in answer to a question. Of course, if what the subject believes to be true happens to be false then the information divulged will also be false-hypnosis does not make the subject any smarter, insightful or knowledgable-he simply cannot deceive.

They can, however, withhold information. Hypnosis cannot be used to directly coerce the subject into divulging information he does not wish to. Such resistance is the action of the conscious mind, however, and can be sidestepped by taking the subject into a deeper trance and interrogating on a subconscious level.

## Implanting

The purpose of implanting suggestions in the subject can vary substantially. It can be used to affect how the subject perceives, thinks and acts. The purpose for doing any of these can very considerably and determines how they are used.

Regardless of the purpose and method, implanting any kind of suggestion requires a roll against Hypnosis. If the subject is being uncooperative there is a penalty equal to the subject's WIL $\times 5 \%$. Note that resistance is the act of a conscious mind and can be avoided by achieving a deep enough trance. The level of success with the Hypnosis roll determines the effectiveness of the suggestion, noted as hSTR. It is increased by the Depth of the trance the subject is in. A subject in a light trance who was given a suggestion with normal success would be subject to a hSTR 2 suggestion. On the other hand a triple critical success with a subject in the deepest trance would give a hSTR 10 suggestion.

Normally a suggestion will simply activate and operate as outlined, but if the subject is resisting the suggestion then generally a hSTR/WIL roll is required to see how effective it is. The level of success in this roll is the new hSTR. If a different method for resolving resistance is specified for a specific case it is used instead. Working with an unwilling subject is not likely to be of much use.

In any case the strength of a suggestion will
fade with time at the rate of 1 point per week. If a suggestion has been in place and tested and held long enough, however, the modification will be permanent even if the suggestion is no longer present.

## Perception

The perception of the subject can be altered, generally to decrease or increase sensitivity to something. This can be done to decrease, or increase, the subject's pain response. To cause the subject to not hear a certain word, to mishear a word, or to not perceive a voice. The dimmest light might be perceived as being brilliant, or the most brilliant as being dim (though staring at it would still be damaging to the vision).

For example, two points of pain reduction (resulting from a special success) would allow the subject to not react to any injury (or other source of pain) as if it were two points less. The effective IP of a light is found in the same fashion.

To redirect a perception (to not hear a specific word or voice, to hear one word as being another) is more difficulty. Generally the effectiveness of the suggestion is matched against the subject's WIT each time the suggestion is brought to bear to see if it was effective.

## Thought

This is most easily described in therapeutic terms. A subject's self confidence can be bolstered by implanting thoughts of them being capable and successful. A rash subject can learn caution by similar means. It can also be used to implant specific thoughts or notions, such as all elves are liars.

## Actions

The actions and reactions of a subject can be altered and preprogrammed as well. A common one is to "go into a trance" at a signal or to "go into a deeper trance next time." The hSTR of such a suggestion is simply added to the level of success in inducing the hypnotic state. This can be an effective way of working into successively deeper trances.

A typical implanted action in a game might be for a guard to open a gate. In as much as this probably contradicts orders the guard is in a dilema. The strength of the guard's loyalty to his orders should be determined and a roll made with that
resisting the hSTR of the suggestion to determine the guard's compliance. In general, a soldier's Discipline determines his loyalty to orders.

Physical rigidity is a commonplace "action" to be suggested as a parlor trick. But it can be used post-hypnotically to make the subject as motionless as a statue. A psychological block against speaking can be employed to prevent the subject from screaming.

## Memories

Perhaps one of the more disturbing kinds of suggestions have to do with altering the subject's memory. Old memories can be obscured and new memories implanted through suggestion. The hSTR determines how detailed and firmly believed the implanted memory is. It is important to note that memories cannot truly be erased, but only obscured.

If a character attempts to recall a blocked memory then he has a penalty to his Memory skill equal to $\mathrm{hSTR} \times 5 \%$. It is hard to hide memories from a character skilled in recall. The same roll is used to test the veracity of an implanted memory that the subject begins to suspect.

Tim Doty

## LaПGUAGE8

Acharacter＇s use of a verbal skill is limited by his skill in the language he is using to communicate with．The precise limitations depend on the type of skill in question．For game purposes there are three types：verbal，non－verbal and mixed．

Verbal skills rely completely or primarily on verbal communication．Bargain，Debate，Elicit and Orate are all verbal skills．

Non－verbal skills rely completely or primarily on non－verbal communication．Bed，Intimidate， Sing and Train［Animal］are non－verbal skills． These are unaffected by the character＇s linguistic ability unless the referee rules otherwise．

Mixed skills rely on a combination of verbal and non－verbal communication．Act，Beg，Bribe，Deceit， Etiquette，Fast Talk，Hypnotism，Make Friend and Question are mixed skills．

There are ten degrees of linguistic proficiency that equate to the character＇s skill level with the language in question．These proficiencies apply in the same manner and for the same reasons to the Literacy［Language］skill and those skills（such as Write）that make use of it．
Survival 0＋（Skill Level 1）
The character can say some words or possibly one of a very few very simple phrases that have been memorized．Vocabulary is incredibly limited，grammatical knowledge is non－existant． For example，a character would likely know

| Communication Limits <br> Skill <br> Mixed |  |  |  |  |
| :---: | :---: | :--- | :---: | :--- |
| Level | Mod | Best Result | Mod | Best Result |
| 1 | $\times 1 / 2$ | Normal | - | Miss |
| 2 | $\times 1$ | Normal | $\times 1 / 4$ | Normal |
| 3 | $\times 1$ | Special | $\times 1 / 2$ | Normal |
| 4 | $\times 1$ | Critical | $\times 1$ | Normal |
| 5 | $\times 1$ | Critical $^{2}$ | $\times 1$ | Special |
| 6 | $\times 1$ | Critical $^{3}$ | $\times 1$ | Critical |
| 7 | $\times 1$ | - | $\times 1$ | Critical $^{2}$ |
| 8 | $\times 1$ | - | $\times 1$ | Critical $^{3}$ |
| $9+$ | $\times 1$ | - | $\times 1$ | - |

how to say：yes，no，hello， goodbye，one，two，three． Additional vocabulary might in－道可道， clude some colors，more numbers， days of the week and so on．

## Survival 1 （Skill Level 2）

The character can communicate on the most basic level only．He can say simple sentances that he has memorized and form coherent phrases from words out of his vocabulary，but there will be many grammatical errors．The character is unlikely to know how to be properly polite，but can communicate basic needs（like hunger）and concepts（ask for prices）．
Vocabulary would include phrases like：how much，what time，when．
Survival 1＋（Skill Level 3）
The character can communicate most simple ideas or concepts．He can form very simple sen－ tances correctly and say moderately complex ones that he has memorized．He can get by on a day－to－day basis in the language，though clumsily and with errors，many embarrasing，in communication．
Conversational 2 （Skill Level 4）
The character can communicate on a day－to－day basis without difficulty，though he will make oc－ casional mistakes．His vocabulary is fairly large， but most of it is only recognized．Grammar is good enough to say simple things correctly－ like person，number and tense for simple situations．This is equivalent to most native speakers in terms of command of the language．
Conversational 2＋（Skill Level 5）
The character will rarely make mistakes with basic grammar and can memorize sentances using more complicated grammatical constructs or large or unusual words．He can attempt con－ versation about abstract subjects，though his lan－ guage ability limits comprehension or expres－ sion of anything beyond superfical facts without making errors．
Conversational 3 （Skill Level 6）
The character has a large vocabulary and is able to communicate on abstract subjects with which
he is familiar. He can express and support opinions and beliefs. This is equivalent to a well-educated native speaker in terms of command of the language.

Fluent 3+ (Skill Level 7)
The character is able to communicate on virtually all abstract subjects and can occasionally make effective use of complicated constructs. Deliberate subtleties can be used which won't be grasped by anyone with less than skill level 4 (and sometimes even others will be lost).
Fluent 4 (Skill Level 8)
The character is able to communicate on a flowery and eloquent level with a subtlety and grace that are lost on anyone with less than skill level 5 (and sometimes even then). This is a rare level of communication due to the difficulty inherent in proper expression and comprehension, although it is the only way to express some abstract concepts.
Fluent 4+ (Skill Level 9)
The character is able to communicate with complicated devices that are incomprehensible to anyone with less than skill level 6 (and sometimes even then).
Master 5 (Skill Level 10) The character is able to communicate with such complex and abstruse devices that they will be incomprehensible to anyone of less than skill level 7 (and sometimes even then). This is an extremely rare level of communication that is fraught with traps for mis-expression or miscomprehension though it is the only way to express some elusive abstract concepts.

## Native Language

Although a character may not have much finesse in his native language (an "average" NPC will be skill level 4 and most player characters won't exceed skill level 5) he will have a facility that comes through long use. This is something that is very difficult for a non-native speaker to ever match. After all, a twenty-year old human will have had nearly twenty years of experience in his native language (at least listening to it). Consequently a native speaker can speak fluidly and fluently even though
their command of the language may not be that great.

One of the ways in which this often manifests is in speed of speech and understanding: a pair of native speakers will often rattle on at a rate in excess of the casual bilingual listener. They will also make more use of idioms. The non-native speaker will always have a tendency to hear expressions literally.

For a non-native speaker to reach the same level of ability would require that they spend a like amount of time using the language exclusively (in which case they will have lost most of their facility with their native language) or work hard at mastering it with time and energy (spend EP on the language skill). If a language skill reaches Score 30 the character can use it as if it were his native tongue. This can have an affect on the difficulty of other language skills.

## Learning Languages

The difficulty of learning any given language depends on the relation between the character's native language and the language to be learned. The language table offers some standard relationships which can be used to determine the difficulty of a given language. A character's native language is always of Easy difficulty.

In regions of extensive trade there is often a "common" tongue used by the traders, merchants and travelers to communicate at a basic level that is a mixture of whatever languages happen to be common in the region. The structures are simple and vocabulary diverse. Exactness of expression on finer points is sacrificed for versatility and ease of use. A trade language is easy for anyone native to the area and average for anyone else. However, it cannot be increased past Score 9. Only far travellers and the merchants that deal with them are likely to learn trade languages.

As learning foreign languages can be difficult and time consuming people often take shortcuts by simplifying the grammar and using a reduced vocabulary. Learning a pidgin reduces the difficulty of the language by one, but it cannot be increased past Score 15. Further, learning a pidgin actually hinders any later attempts to learn the proper lan-

## Languages


guage. For game purposes they are treated as two distinct skills. Proficiency in one gives no assistance with the other.

For the serious linguist, a character can substitute any language he knows at Score 30 or higher for his native tongue when consulting the language table. For example, if a character whose native tongue was Ossynian learned Dvergar, an Average language for him, to Score 30 he could learn Sylvan as if it were an Hard language instead of Very Hard. If, for some reason, his skill in Dvergar were to later drop below Score 30 then Sylvan would have its normal difficulty which would decrease the skill score.

Language skills are rarely rolled against as they represent fluency in a general way as outlined previously. However, a skill roll may be used to
reflect how much or how quickly a character understands a written text.

If a character travels far enough he will encounter dialectal differences to the forms of the languages he knows, even with his native tongue. If using a dialect the character's language skill is effectively reduced by 8 . If Inch the Thief, who knows Sylvan at Score 12, were trying to persuade some wood elves from a distant forest he would have an effective Score 4. He'd have difficulty trying to get basic information, much less use persuasion. A pidgin from a different area is a different language: only speakers of the same pidgin, or the language the pidgin is based on, can talk with one another.

A character can actually study a dialect to overcome this difficulty. Any experience points put
into the study of a dialect must be tracked separately. To find the dialect skill score they are added to a base experience point value equivalent to the penalized language skill. A dialect can never be raised above the skill score of the base language.

For example, Inch finds himself needing to communicate more effectively with these foreign wood elves. For Inch, his understanding of the dialect is Score 4 which equates to 2 experience points. If he spent 4 experience points on improving his understanding of the dialect he would have an effective total of 6 experience points or Score 7. If he later increased his Sylvan skill to Score 15 this would give him a base dialect of Score 7 and with the dialect used by these foreign wood elves he would have an effective $(6+4) 10$ experience points giving him Score 9 .

## Literacy

This skill represents the character's ability to read and write the specified language. The difficulty of this skill is based on that of the language (see Speak [Language] later in this chapter for more information), but adjusted for the complexity of the written form. Most languages are one step easier than their spoken form, though never better than Easy. Some are the same difficulty and a few are more difficult, though never more difficult than Very Hard.

For example, a character whose native tongue is Sylvan wishes to become literate in it: this is an Easy skill for him. A character whose native tongue was Ossynian also desiring to become literate in Sylvan would have difficulty Hard.

When reading it takes five minutes to earn a skill roll with the difficulty being the square of the depth of understanding required for the passages in question. The depth of understanding requirement is the minimum skill rank to be able to comprehend the passage. For example, children's literature has a depth of one and a difficulty of 1 ; a character with less than Score 6 has no chance of comprehending the book. Adult literature varies, but is generally of depth two and thus difficulty 4 ; a character with less than Score 12 has no chance of comprehending the book. Technical works vary, but are usually at least of depth three and thus difficulty 9 ; a character with

| Spell Books |  |  |  |
| :---: | :--- | :---: | :---: |
| SL | Complexity | Depth | Difficulty |
| 1 | Simple | 1 | 1 |
| $2-4$ | Average | 2 | 4 |
| $5-9$ | Hard | 3 | 9 |
| $10-16$ | Complex | 4 | 16 |
| $17-25$ | Multiplex | 5 | 25 |
| $26-36$ | Omniplex | 6 | 36 |

less than Score 18 has no chance of comprehending them.

The level of success determines the number of passages read. The skill roll may be modified for particular difficulty due to the quality of writing and the condition of the writing medium. To read a whole book thus requires many rolls.

A spell described in a grimoire typically has as many passages as its level and a depth of undestanding equal to the square root (rounded up) of its level. Each passage must be fully understood before the character can attempt to cast or memorize the spell. Alchemical texts are pretty mind boggling and most alchemists don't have a proper understanding of what they are doing except for the simplest of formulas. Note that once a passage has been read and correctly understood rereading that passage does not require a roll.

The "Common" language has no written form per se as it varies from location to location and has no native script. A local approximation would be of Easy difficulty. For most languages the written form is one step easier than the verbal, exceptions are noted below. Of course, nothing is easier than Easy so for most languages native speakers learn the written form as an Easy literacy. Likewise, no written form is more difficult than Very Hard.
Akkadian, Ašuri, Durgah, Elder, Ġarbi, Low Drakkon, Nipponese and Oogah literacy are of the same difficulty as the spoken form.
Han literacy is one step harder than the spoken form.
High Drakkon is two steps harder than the spoken form.

Wilding has no written form.

| Achaian $(-1)$ | Low Drakkon $(-)$ |
| :--- | :--- |
| Akkadian $(-)$ | Middle Kingdoms (-1) |
| Ašuri $(-)$ | Nipponese $(-)$ |
| Cobb $(-1)$ | Nobb $(-1)$ |
| Durgah $(-)$ | Old Cobb $(-1)$ |
| Dvergar $(-1)$ | Oogah $(-)$ |
| Elder $(-)$ | Ossynian $(-1)$ |
| Garbi $(-)$ | Queran $(-1)$ |
| Gurk $(-1)$ | Ræf $(-1)$ |
| Han $(+1)$ | Sidhe $(-1)$ |
| High Drakkon $(+2)$ | Sindar $(-1)$ |
| High Elvish $(-1)$ | Sylvan $(-1)$ |
| Ilryian $(-1)$ | Umbar $(-1)$ |
| Low Cobb $(-1)$ | Wilding $(\mathrm{n} / \mathrm{a})$ |

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## LORE

This category of skill represents those things which are pure knowledge and not, in and of themselves, functional. Consequently they can only be learned through absorption of the information-in a class room, from a book or through direct observation. And some times the last is not possible, as in the study of history.

A character gets a single chance, taking one round, to be able to answer a question. If the roll is missed then he is unable to recall the information and may roll again after the amount of time indicated on the Lore Recheck table. If the roll is failed the character does not know the information. If the roll is fumbled the character

| Lore Recheck |  |
| :---: | :--- |
| $1 d 6$ | Time Lapse |
| 1 | 1 round |
| 2,3 | 3 minutes |
| 4,5 | 1 hour |
| 6 | 1 day | gives incorrect information.

Each area of lore is a separate skill with its own difficulty level. The various possibilities and their difficulties are outlined as follows.

## Ancient History

This skill is knowledge of ancient history as defined in the context of the campaign. This skill is different for each region, the size of which determines difficulty as found on the Difficulty by Region table. As a rule of thumb it covers important persons and events from about three centuries ago to the beginning of recorded history. However, it is important to remember that by its very nature the amount and accuracy of detail will be less than that for normal history lore.

Basic knowledge of major events (its general nature) and persons (their name) has a difficulty score of one per one hundred years. A brief synopsis generally has a difficulty score of two per one

|  | Difficulty by Region |  |
| :--- | :--- | ---: |
| Difficulty | Size | Region |
| Easy | Shire | 10 sq mi |
| Average | Barony | $1,000 \mathrm{sq} \mathrm{mi}$ |
| Hard | Kingdom | $100,000 \mathrm{sq} \mathrm{mi}$ |
| Very Hard | Empire | $10,000,000 \mathrm{sq} \mathrm{mi}$ |

hundred years and a reasonably full account has a difficulty score of five per one hundred years. More obscure events or personages have correspondingly higher difficulty scores. The higher the level of success the more information is provided, though it is up to the referee to interpret the results in the context of his campaign.

As an example, to recall the name of the ruler of the region 1,000 years ago would require a Lore Ancient History skill roll with a difficulty of 10 . To give a brief recap of his reign would have a difficulty of 20 and to give a short biography would be difficulty 50 .

This skill can also be used to gain information about the culture and society of the region at any given time using the previous guidelines. For example, to check what language was extant in the area 2,000 years ago is difficulty 20 while getting a brief overview of the religion would be difficulty 100.

## Animal

This skill is knowledge of animals: their characteristics, behaviors, habitats and so on. There is an overview with Lore Animal and detail skills with Lore [Animal]. In general all of these are of Average difficulty. The overview skill gives knowledge of collected and aggregate facts. For example, smaller mammals tend to have shorter life spans. It also covers basic definitions, such as "what is a mammal." This skill would allow a character to categorize an observed animal. Although generally this is a Very Easy task some of the more unusual species make for more difficult categorization.

Other animal lore skills are specific to particular species, such as fire drake or wolf. In some cases there is a group of closely related species, such as with the Bear-Boar. In such cases the referee must make a judgement call as to whether or not a collected animal lore skill is allowed, and if so at what

| Local Area Knowledge |  |  |
| :--- | :--- | ---: |
| Difficulty | Urban Size | Region |
| Easy | Village | 10 acres |
| Average | Town | 100 acres |
| Hard | City | 1,000 acres |
| Very Hard | Metropolis | 10,000 acres |

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difficulty. In the case of the horse the given variations are so similar that Lore Horse (A) should cover all of them. However, there is enough variation between the bears to make Lore Bear a Hard skill. Although bears as a whole behave similarly there is significant variation in habitat and characteristic. If there is no particular similarity between the listed subtypes, or each has significant independence from the others, then no collection skill is possible. Such is the case for the apes.

## Area Knowledge

This skill is knowledge of the specified region and comes in two basic flavors: specific and general. A specific area knowledge skill is of a village, town or other small and well-defined region. A general area knowledge skill is of larger areas, such as baronies, kingdoms and empires.

## Local Area Knowledge

A local area knowledge skill difficulty is determined by the size of the area. A village is Easy, a town is Average, a City is Hard and a Metropolis is Very Hard. The equivalent acreage for determining the difficulty of other areas is summarized on the Local Area Knowledge table. Local area knowledge gives the character:
...knowledge of paths, trails, alleys, streets and roads. Knowing the location of any path or street depends on how well known it is. Generally this is an Easy task, but if a colloquial name not in use for ten years is employed the task becomes Very Hard.
...knowledge of routes. It is one thing to know where a path or street is, it is another to know how it is used. Or to know what route the city watch follows when it patrols the merchants quarter. Generally knowledge of a route is an Average task, though knowing what route a particular group or person takes is typically much more difficult, up to Very Hard or Tough under most situations.
...knowledge of locations by name, purpose and function. For landmarks this is nearly always a Sure Bet task, that is why they are called landmarks. For locally important businesses this is an Extremely Easy task and for a regular business this is an Easy task. For an obscure business this may be Average to Hard, though it should be noted the less well known a business the less profitable and/or traf-
ficked it will be. Similarly, a locally important person's residence will be Very Easy to locate and other significant residences will be Average difficulty. Locating the residence of a regular person is Hard and if the person lives in a tenement knowing their specific room is Tough.
...ability to construct ideal routes. This ranges from the simple "shortest route between points A and B" to the more complex "route between points A and B least likely to encounter the city guard." The difficulty of this task varies considerably with details of the task and the city in question, ranging anywhere from Automatic (shortest path to a business on the same block) to Impossible (route to get across the city without getting wet during a rain storm).

## General Area Knowledge

A general area knowledge skill difficulty is determined by the size of the area as given in the Difficulty by Region table. This is a top-down view of the region so the easiest tasks are recalling the most general information. For example, if the region is a kingdom then it is an Incredibly Easy task to enumerate the baronies within it.

Knowledge of the routes and roads between centers of commerce in the region is an Easy task, while finding an alternate or little used route is more difficult (the exact difficulty would really depend on the circumstances, but generally an alternate route is a Moderately Easy task and identifying a little used route is an Average task).

Knowledge of the locations by name, purpose and function. For landmarks this is nearly always a Sure Bet, for who can miss the infamous Crag Mountain or Rome, capital of the Empire. For centers of commerce this is an Extremely Easy task while for more obscure towns this may be an Average to Hard task. Knowing the location of a named but insignificant village is a Hard to Tough task.

## Earth

This Hard skill covers knowledge of the earth such as its composition. This implies knowledge of the relative fertility of a piece of ground, as well as if an area is iron-rich.

## Economics

This skill is knowledge of economics and the world of finances. The difficulty varies by the region covered as given on the Difficulty by Region table. The skill is primarily useful in properly evaluating the worth of some merchandise in a particular market or to estimate the profitability of some venture. As a guideline the margin of error in the estimation of value is $5 \%$ for a critical success, $10 \%$ for a special success and $20 \%$ for a normal success. A fumble means that the character either greatly overestimates the value or greatly underestimates it. For convenience, the referee may allow any successful roll to give the standard market value as found on the price list.

## Heraldry

This Hard skill is knowledge of heraldic devices. It can be used to "read" heraldic symbols, to compose proper heraldic devices, and to identify the owner of a particular device. It is important to note that this is a separate skill for each heraldric system though in practice there will normally be but one system in any given large region. There will be many variations, but this is covered in the difficulty of the skill. More particularly, unless a group completely foreign to the region as a whole and possessing their own heraldric devices invades then a single skill is sufficient for all cases. As an example, the entire scope of heraldry originating in and around Europe would be considered a single system of heraldry.

## History

This skill is knowledge of history with a difficulty determined by the size of the region covered as found on the Difficulty by Region table. Although it is primarily useful in identifying and describing politically important persons and events it can also be used to cover social and cultural phenomena and events.

To name, or recognize by name, a politically important person, place or event has a base difficulty of one per five years lapsed since the person's or place's significance. A brief synopsis has a difficulty of two per five years elapsed and a reasonably full description or account has a difficulty of five per five years elapsed.

For example, recalling the name of the king twenty years ago (or that he was the same king as
now) would have a difficulty of 4 while giving a biography of said individual would, if he had fallen from public view twenty years ago) have a difficulty of 20.

To recall the existence of a fad has a base difficulty of one for every two years elapsed since it fell out of favor. To give a brief synopsis of the fad has a difficulty of two for every two years elapsed and to give a full description has a difficulty of five for every two years. For example, remembering a short-lived clothing fad of ten years ago would have a difficulty of 5 , while recalling what the style consisted of would have a difficulty of 10 and a full accounting of the fad could be given with a difficulty of 25 .

## Law

This Hard skill is knowledge of legal principles, specific statutes, precedents and commonlaw. For a given region practicing a consistent law. The size of the region depends on its influence and does not affect the skill's difficulty. Keep in mind that this skill is only knowledge of the law. In practice it is combined with Debate, Orate or Bribery to persuade the judging authority. In game terms it is most useful for answering legal questions before the fact so that appropriate plans can be made.

The difficulty of the task translates plainly to the difficulty score used. For example, in most jurisdictions the punishment for an uncontested aggravated assault may have some variability to it, but the outcome is not really in question and a decent lawyer can predict with great accuracy what the penalty will be.

A more typical court case would have an Average difficulty to ascertain its particulars while a convoluted one will be Hard or even Tough to make sense of.

## Plant

This Hard skill is an overall knowledge of plants. It gives knowledge of collected and aggregate facts, covering basic definitions, such as "what is a fungus." This skill would allow a character to categorize an observed plant. Although generally this is a Very Easy task some of the more unusual species make for more difficult categorization.

Evaluating whether or not a particular plant is

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poisonous is really a function of the relevant Survival skill and identifying herbs, their properties and traditional usages is the purview of the Herbal skill. However, this skill can be used to identify a plant (generally an Average task) as well as properly observe it to make a record or allow a more knowledgable person identify it.

## Poison

This Hard skill covers recognizing, preparing and countering poisons. For more information about poisons consult Book 3: Hazards.

## Religion

This Hard skill is an overview knowledge of religion and philosophy including terms and problems. It is necessary to conduct religion or philosophical discourse in a meaningful manner outside the context of a particular religion. The effective skill score is limited by the lowest language score involved in the communication. For example, if a character with Lore Religion 26 writes a book using Literacy Common 21 which is then read by someone having Literacy Common 15 then the instructional value of his Lore Religion skill is only 15.

Lores for specific religions are usually of Average difficulty. These skills cover theosophical issues solely in the context of the religion in question, official doctrine and official history. These skills cover practices and ceremonies only in an overview fashion that is insufficient to attempt practice of the religion (for that the appropriate Ceremony skill is needed), only enough to discuss such practices in a general way.

## Sea

This Hard skill is knowledge of the sea and things marine. It would be used to identify a marine creature, to know why waters would be a particular color, to recognize shoals, and to interpret interference patterns in the waves. This is an overview skill covering the collected and aggregate knowledge. For regional specialization use the appropriately qualified Area Knowledge skill.

## Spirit

This Hard skill is knowledge of spirits and the spirit world. It is used to determine a shaman's chance of
success with casting spells using bound spirits. It covers general information about spirits and the spirit world with a difficulty appropriate for the information in question. As a rule of thumb the more distant the spirit realm in question the more difficult the task. To identify or recognize by name the type of a spirit is generally a difficulty of one per realm distant. To provide a brief synopsis of the type of spirit is a difficulty of two per realm distant and to provide a thorough description is a difficulty of five per realm distant. Similarly general questions can be answered with similar difficulties.

This is an overview skill-to specialize in a realm use the Area Knowledge skill with a difficulty of Very Hard, or a single plane with a difficulty of Hard. For more information on what this yields consult the Area Knowledge description.

## Weather

This Hard skill provides a general understanding of the weather and climate. It covers observing and predicting the weather, although weather prediction is fraught with uncertainty and as a rule of thumb has a difficulty to forecast equal to the number of hours. So to forecast tomorrow's weather is difficulty 24 and a three-day forecast is difficulty 72.

## Martial Art8

In Rune Master, martial artists pursue an extreme refinement of their combat skills. In and of itself, martial arts does nothing for the character, merely facilitating and enhancing his other skills and capabilities. A true martial arts master would not only master this skill, but Punch, Kick, Brawl, Grapple and Dodge as well-and even Meditation. Noting, however, that no all martial arts styles focus on unarmed combat: several styles hone the usage of a weapon instead.

A martial arts school will teach one or more styles. Each style is a separate instance of the Martial Arts skill and must be learned and used separately. Only one style can be utilized at a time: at the beginning of each round the player must declare which style he is using. Consequently if the character wants to be able to use the Kiai (or any other) technique in each style he must learn each style's variation. Techniques are not at the heart of the matter, though, and the Martial Arts skill represents the character's understanding of his body, spirit and how they flow together-each style representing a different path to reveealing that truth.

A character's martial arts rank is determined by his skill rank in the style in question. To be able to make use of a particular technique the character must have learned it. Techniques are learned when a character gains a new rank: he can learn any technique (taught in his style) whose rank does not exceed his own as long as the total of the ranks of new techniques does not exceed his Martial Arts Points.

For example, a martial artist who learned the Kiai technique upon attaining rank 1 could learn

| Rank |  |  |  |  |
| :---: | :---: | :---: | :--- | :--- |
| Martial Arts | Rank | Points | Sash | Title |
| $0-5$ | 0 | 0 | White | - |
| $6-11$ | 1 | 1 | Yellow | Novice |
| $12-17$ | 2 | 3 | Green | Initiate |
| $18-23$ | 3 | 6 | Blue | Disciple |
| $24-29$ | 4 | 10 | Red | Adept |
| $30-35$ | 5 | 15 | Black | Master |
| each +6 | +1 | +Rank |  |  |

both Lightning and Double Punch upon attaining rank 2. He could not learn the Parry technique at all until he obtained rank 3.

More over, the total of all technique levels employed in a round cannot exceed the character's Martial Arts skill level. For example, at rank 3 a character has a Martial Arts Level of 6 and, assuming he knew these techniques, could take a second consecutive action (Combo 1), use Double Punch for each action (rank 2, twice), and get a Kiai with one of the double punches (rank 1).

It is traditional for martial artists formally enrolled in a school to wear a uniform consisting of baggy pants and a shirt with a sash worn to indicate their relative rank. The colors listed in the table are common, but not held by all schools. The same is true for the titles.

## Styles

The following techniques are intended as examples and interpretations of real martial arts for game purposes. They are not intended to define a real martial arts style. Although these rules present a good selection of styles, they should not be considered definitive. Care should be taken if a new style is added to preserve balance. Creating a style that is customized to exactly and only the techniques a character wants is probably not a good idea. Establishing a new style that amounts to Kyūjutsu, but for slings, is probably fine.

## Aikido

This style revolves around the perception and manipulation of chi. Although many, if not all, martial arts styles do so to some extent (as in the Kiai technique), Aikido is concerned with more direct perception and manipulation. This is the quintessential "soft" martial art. No strikes are taught, just feeling and manipulating energies to purpose. There is a strong emphasis on meditation and pacifism.
Skills
Dodge, Grapple, Meditation

## Techniques

Block [Grapple], Blend, Combo, Fall, Greased Lightning, Grip, Inner Strength, Kiai, Lightning, Parry [Grapple], Redirect, Reversal, Riposte
[Grapple], Roll, Utilize, Zanshin.

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## Bojutsu

This style uses bo-sticks or quarterstaffs ranging from six to twelve feet in length, though up to eighteen foot staves have been used.

## Skills

Dodge, Staff
Techniques
Combo, Deflect Missile [Staff], Disarm [Staff], Double Strike [Staff], Greased Lightning, Kiai, Lightning, Quick Engagement, Reflect Missile [Staff], Sweep [Staff], Throw [Staff], Zanshin

## Jojutsu

This style uses jo-sticks, fighting sticks of about two feet in length which a practitioner will use, one in each hand, to pummel his opponents with rapid flurries of strikes.

## Skills

Dodge, Club 1-H

## Techniques

Combo, Deflect Missile [Club 1-H], Disarm [Club 1H], Double Strike [Club 1-H], Fast Draw [Jo-stick], Flying, Greased Lightning, Inner Strength, Kiai, Lightning, Off Hand Weapon [Club 1-H], Reflect Missile [Club 1-H], Throw [Club 1-H], Two Weapon [Club 1-H], Zanshin.

## Judo

This style is primarily a "soft" martial art and defensive in nature, but some strikes are included. It has a strong foundation in grappling and fighting from the ground.

## Skills

Dodge, Grapple, Punch

## Techniques

Block [Grapple or Punch], Combo, Disarm [Grapple or Punch], Fall, Fight From Ground, Greased Lightning, Inner Strength, Kiai, Lightning, Redirect, Roll, Zanshin.

## Kali

This style uses a whip to keep opponents at bay and control them with a knife for use if the opponent manages to close.
Skills
Dodge, Knife, Whip

## Learning Techniques

In addition to the normal learning of techniques as outlined in the main rules a martial artist character can, with referee approval, learn a technique if he receives training from an insructor that knows the technique, and the martial artist meets the prerequisites. Such directed training in the performance of the technique provides no experience points, instead granting the martial artist the ability to use the technique as if it had been acquired normally.

It takes a number of hours of training equal to five times the number of experience points required to reach the requisite skill rank for the technique. For example, a martial artist with WIT 12 would require twenty five hours of training to learn a rank 1 technique.

Techniques
Combo, Deflect Missile [Whip], Disarm [Whip], Double Strike [Whip], Entangle, Greased Lightning, Inner Strength, Lightning, Off Hand Weapon [Knife or Whip], Zanshin.

## Kenjutsu

This style revolves around the use of the katana and is an example of a weapon-based martial art. It would be appropriate for samurai characters.

## Skills

Dodge, Sword 1-H, Sword 2-H

## Techniques

Combo, Deflect Missile [Sword 1-H or 2-H], Double Strike [Sword 1-H or 2-H], Fast Draw [Sword 1-H], Flying, Greased Lightning, Inner Strength, Kiai, Lightning, Off Hand Weapon [Sword 1-H], Reflect Missile [Sword 1-H or 2-H], Throw [Sword 1-H], Two Weapon [Sword 1-H], Zanshin.

## Kung-Fu

This style is one of movement and showier than the rest. It is intertwined with acrobatics and an accomplished Kung-Fu master could do a turn as a gymnast. As such it is a combination of "hard" and "soft" martial arts, not truly belonging to either.

Skills
Acrobatics, Dodge, Kick, Punch

## Techniques

Backflip, Backflips, Backflip Sprint, Block [Kick or Punch], Combo, Deflect Missile [Punch], Disarm [Kick or Punch], Fall, Flying, Greased Lightning, Inner Strength, Jump Behind, Kiai, Leap, Lightning, Move Behind, Move Past, Reflect Missile [Punch], Roll, Run Up Wall, Zanshin.

## Kyūjutsu

This style involves techniques to both improve archery and use it in special ways. It is an example of a weapon-based martial art that is suitable for a weapon master. Although techniques such as Deflect Missile and Reflect Missile are normally limited to those made against the martial artist, due to the ranged nature of the weapon used these techniques can be used against any missile being tracked by the martial artist.

Fast Draw Arrow allows the arrow to be readied with no time, though it must still be knocked and drawn which takes one action. Fast Draw Bow allows a ready arrow to be knocked and drawn without taking time. When combined an arrow (that is ready to hand) can be readied, knocked and drawn without taking time.

If the martial artist has two arrows ready to hand and knows the requisite techniques he can snap shoot two arrows in a single SR at a single target by applying nine Martial Arts Technique Levels.

## Skills

Archery

## Techniques

Combo, Deflect Missile [Archery], Disarm
[Archery], Double Strike [Archery], Fast Draw [Arrow or Bow], Greased Lightning, Instant Aim [Archery], Kiai, Lightning, Perfect Aim [Archery], Quick Aim [Archery], Reflect Missile [Archery]

## Masaki Ryu

This style uses a manriki-gusari or chain to entangle, disarm and strike opponents. It is primarily practiced by warrior-monks and ninja. Although uncommon it is an effective style.
Skills
Chain, Dodge

## Techniques

Combo, Deflect Missile [Chain], Disarm [Chain], Double Strike [Chain], Entangle, Fast Draw [Chain], Greased Lightning, Inner Strength, Joint Strike, Kiai, Lightning, Reflect Missile [Chain], Throw [Chain], Zanshin.

## Scuola Magistrale

This style uses the rapier or a rapier/main gauche combination. Concentration is on speed and skill with an emphasis on flair. Although not strictly part of the style, acrobatics is important to it, as is dressing appropriately. Riding boots, a large cloak and a large hat are all part of the ensemble.

## Skills

Fencing 1-H, Knife, Throw Knife
Techniques
Combo, Deflect Missile [Fencing 1-H], Disarm
[Fencing 1-H], Double Strike [Fencing 1-H], Fast Draw [Knife or Fencing 1-H], Flying, Greased Lightning, Inner Strength, Lightning, Off Hand Weapon [Knife or Fencing 1-H], Throw [Fencing 1$H$ ], Two Weapon [Knife and Fencing 1-H], Zanshin.

## Shaolin

This style requires great precision and is perhaps the best way to kill with flair. It is a "hard" martial art, but should not be confused with the brute force approach generally associated with those.
Skills
Dodge, Kick, Punch
Techniques
Block [Punch], Combo, Death Touch, Eye Pluck, Greased Lightning, Harden Fist, Inner Strength, Kiai, Lightning, Nerve Strike, Paralysis Strike, Parry [Punch], Precision Strike, Riposte [Punch], Toughen Fist, Zanshin.

## Shinobi

This style is concerned with stealth and subterfuge as much as it is about combat. Although not strictly speaking part of the art, its use is usually associated with poison and assassins.

## Skills

Dodge, Hide, Sneak, Sword 1-H, Throw Knife

## Techniques

Blend, Combo, Deflect Missile [Sword], Fast Draw [Shuriken], Fast Draw [Sword 1-H], Greased
Lightning, Inner Strength, Kiai, Lightning, Redirect, Reflect Missile [Sword], Run Up Wall, Zanshin, Zazen.

## Stūjitsu

This style is unique in that it is the martial arts of mayhem-brawling mayhem to be precise. It was founded by Master Mōlaikulī, by all accounts a split personality sociopath who should have died many times through sheer stupidity, but whose immense art perserved him.

There is a certain... flair to the practitioners of stūjitsu, a je ne sais quoi to how they poke eyes, slap faces, punch and even kick. This style is only available if the referee explicitly allows.

## Skills

Brawl, Kick, Punch

## Techniques

Absorb Damage, Belly Bounce, Block [Brawl], Combo, Consternate, Distract, Double Eye Poke, Eye Poke, Face Slap, Fall, Hat Flap, Hypnotize, Parry [Brawl], Provoke, Rile up, Roll, Roundhouse Slap, Spinning Slap.

## Taekwondo

This style is a straight-forward bash-'em-up "hard" martial art with an emphasis on kicking. However, that should not be meant to imply a practitioner is incapable of finesse.

## Skills

Dodge, Kick, Punch
Techniques
Combo, Disarm [Punch], Double Kick, Double Punch, Flying, Greased Lightning, Inner Strength, Joint Strike, Kiai, Lightning, Spin Kick, Sweep Kick, Take Weapon [Punch], Triple Punch, Zanshin.

## Techniques

A martial artist can only learn techniques taught by the style he is studying. If the technique is one mastered by the instructor then the student can pick it up as part of the normal learning process.

Otherwise the student must spend ten hours per rank of a technique to master it. Techniques can normally only be used with unarmed actions, exceptions are noted in the description.

## Absorb Damage <br> Rank special

This technique allows the martial artist to absorb in a single round a total number of points of brawl or stun damage equal to Rank times the rank of the technique. Thus a skill score 25 a martial artist using the rank 4 version of this technique can ignore up to 16 points of brawl or stun damage in a round.

If the martial artist is hit with crush damage then damage can still be absorbed but at a lesser rate. Each point of crush damage counts as skill rank points of damage, but is converted to stun. To continue the previous example, if the martial artist were hit for three points of crush then that would count as twelve points of damage that can be absorbed (because he is skill rank 4), leaving him with four points to absorb the three points of stun left over. He can absorb one further point of either stun or brawl damage in the round, though crush damage will be unaffected as there are insufficient absorption points remaining to stop even a single point of crush.

## Backflip

## Rank 1

This technique allows the martial artist to specify that a hex of movement is in fact a backflip costing the martial artist twice the normal FP for the round. The number of backflips in a round cannot exceed the martial artist's Acrobatics skill rank and the character cannot do consecutive backflips. If a backflip is performed in the same SR as an attack is made against the martial artist the attack is at an additional penalty of 2 to hit. Any action, other than a Dodge, attempted by the martial artist in the same SR as a backflip has a 6 penalty. This technique cannot be used more than once in a round and cannot be combined with Backflips or Backflip Sprint (excepting appropriate use of rune mastery powers of course).
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## Backflips

Rank 3
This technique can only be learned if the martial artist knows the Backflip technique. It is the same as the Backflip except that the martial artist can do consecutive backflips and can do up to his
Acrobatics skill level backflips in a single round. This technique cannot be used more than once in a round and cannot be combined with Backflip or Backflip Sprint (excepting appropriate use of rune mastery powers of course).

## Backflip Sprint

## Rank 5

This technique allows the martial artist to increase his movement rate by Acrobatics skill rank by specifying that he is performing backflips. To gain this benefit the martial artist must do at least as many backflips as his Acrobatics skill level. Using this technique doubles the martial artist's fatigue cost for the round. This technique can only be learned if the martial artist knows the Backflips technique. This technique cannot be used more than once in a round and cannot be combined with Backflip or Backflips (excepting appropriate use of rune mastery powers of course).

## Belly Bounce

Rank 2
This technique allows the martial artist's attack to do knockback instead of stun and involves using the belly to forcefully strike the opponent. This technique cannot be combined with other attack techniques such as Eye Poke or Face Slap.

## Blend

Rank 3
This technique allows the martial artist to move synchronously with his opponent such that he can move through his opponent's hex as if it were unobstructed unless the opponent also knows this technique, has declared it, intends to block the use of this technique and has equal or greater Meditation skill rank. This technique can only be learned if the martial artist knows the Redirect technique.

## Block

## Rank 1

This technique allows the martial artist to use an unarmed combat skill (specified when the technique is learned) action defensively for effective blocking of unarmed, blunt weapon or hafted weapon attacks.
The Parry value is equal to the martial artist's Rank. A Block can only be declared as deflect.

## Combo

## Rank special

This technique allows the martial artist to take additional normal melee attacks (with skills taught by the style in question) in a round, each trailing the previous by at least 1 SR and costing an additional FP (2 FP for armed attacks) - the total additional FP are reduced by the martial artist's skill rank. When used with a ranged attack (with skills taught by the style in question) martial arts techniques applied to the first action are applied to all subsequent combo actions without needing to apply more Martial Arts Technique Levels. For example, a kyūjutsu martial artist can make three shots in three strike ranks by using Combo 2, Fast Draw Arrow and Fast Draw Bow only taking six Martial Arts Technique Levels instead of the twelve that would normally be required to take Fast Draw Arrow and Fast Draw Bow three times.

The most additional attacks that can be taken are equal to the rank of the technique being used. To learn this technique at a given rank it must first be learned at the previous rank. In other words, to take three additional actions using this technique would require that a rank 1 , rank 2 and rank 3 Combo be learned, though only the rank 3 Combo is used to get 3 additional actions.

## Consternate

## Rank 2

This technique allows the martial artist to confuse his opponent to the extent determined by a POW/POW roll made at the beginning of the round. The effect is to lower the opponent's SR by level of success times martial arts rank. If the opponent's SR is reduced below zero then the opponent is so flustered as to not get any action.

## Tim Doty

## Death Touch

Rank 5
This technique requires the martial artist to declare a Called Shot using Precision Strike to target the throat and can only be used with a Grapple or Punch attack and only against opponents not having armor covering the throat. If the attack is successful the target takes one point of damage at the end of each round until dead or the death touch is lifted.
Any martial artist knowing this technique can lift a death touch with a successful Punch skill roll. To learn this technique requires the martial artist to know Nerve Strike.

## Deflect Missile

Rank 3
This technique gives the martial artist a bonus of 10 when parrying ranged attacks with a skill specified at the time the technique is learned.

## Disarm

Rank 3
This technique allows the martial artist to use an offensive action with a combat skill (the skill being specified when the technique is learned) to disarm an opponent by matching the damage rolled plus the martial artist's Martial Arts Level against the opponent's DEX. This attack results in no damage being done to the opponent.

| Success <br> Critical $^{3}$ | Result <br> Can choose to take possession of the <br> weapon if within three hexes |
| :--- | :--- |
| Critical $^{2}$ | Weapon thrown in chosen direction 1s6 <br> hexes |
| Critical | Weapon thrown in chosen direction one <br> hex |
| Special | Weapon thrown in random direction one <br> hex |
| Normal | Weapon drops into opponent's hex |
| Miss | No effect <br> Opponent gets to riposte unless he failed |
| Failure | or fumbled a defense <br> or |
| Fumble | Martial artist injures himself on <br> opponent's weapon for normal damage |
| Fumble ${ }^{2}$ | Martial artist injures himself on <br> opponent's weapon for double damage |
| Fumble $^{3}$ | Martial artist injures himself on <br> opponent's weapon for triple damage |

## Distract

Rank 1
This technique is combined with the martial artist's attack to distract the opponent and thus get a cheap shot. Doing so requires a POW/POW roll, success halves the opponent's defense score while a special reduces it to 1 . Each level of critical success gives a $1 \%$ bonus to hit.

## Double Eye Poke

## Rank 4

This technique allows the martial artist to do an Eye Poke that cannot be defended against, but doing so requires use of both hands. This technique can only be learned if the martial artist already knows the Eye Poke technique.

## Double Kick

## Rank 2

This technique allows the martial artist to make two Kick attacks against the same opponent with a single action, and thus in the same SR. The second kick is unaffected by any options taken to improve the first, though a single kiai will benefit both. This technique costs the martial artist an additional 1 FP.

## Double Punch

## Rank 2

This technique allows the martial artist to make two Punch attacks against the same opponent with a single action, and thus in the same SR. The second punch is unaffected by any options taken to improve the first, though a single kiai will benefit both. This technique costs the martial artist an additional 1 FP .

## Double Strike

## Rank 3

This technique allows the martial artist to make two attacks against the same opponent with a single action and thus in the same SR. The second attack is unaffected by any options taken to improve the first, though a single kiai will benefit both. This technique can only be used with the weapon skill specified at the time it is learned. Each use of this technique with a melee attack costs the martial artist an additional 2 FP . This technique can only be learned if the martial artist knows Greased Lightning.

## Entangle

## Rank special

This technique allows the martial artist to use Chain skill as Grapple in a limited fashion. At rank 1 the hold technique can be used and each additional rank learned allows an additional grapple attack to be learned. Note that the grapple attacks are tied to the rank of this technique when learned. So if the martial artist learns Take Down with Entangle 3 then he must use Entangle 3 to be able to attempt the Take Down. Also note that grapple attacks cannot be combined-a hold must always be obtained first and obtaining the hold grants no bonus to success for subsequent grapple attacks. Use of Double Strike with this technique does allow a hold to be followed by another grapple attack in the same SR.

## Eye Pluck

## Rank 5

This technique allows the martial artist to declare a Called Shot with a Punch attack to target an eye. If at least one point of non-Stun damage is done past armor the eye is removed. Sudden loss of an eye causes the character to lose three points of morale. This technique can only be learned if the martial artist also knows Precision Strike.

## Eye Poke

Rank 2
This technique allows the martial artist's brawl attack to be a called shot to the head and always ingoring all armor. It can otherwise be defended against as normal. This technique cannot be combined with other attack maneuvers such as Belly Bounce or Roundhouse Slap.

## Face Slap

Rank 1
This technique allows the brawl attack to do stun damage, always strikes the head, and is primarily useful to keep a fight non-lethal. It can be combined with Eye Poke and Double Eye Poke.

## Fall

## Rank 1

This technique allows the martial artist to fall in such a way as to reduce any injury therefrom by a number of points equal to his Martial Arts Level. This technique can only be used once per fall, ex-
cepting appropriate use of rune mastery powers of course.

## Fast Draw

## Rank 2

This technique allows the martial artist to draw a weapon (specified when the technique is learned) and strike as a single action. The net effect of the technique is to halve, rounding down, the SR penalty for drawing the weapon. This means at skill score 24 and above the martial artist can attack with a sheathed sword without suffering a strike penalty by spending 1 FP . This can also be used to generally draw the weapon such as for a parry. Missile weapons requiring one action to ready the missile and one to ready the missile launcher require a separate fast draw technique for each action. This technique cannot be used to reduce the time required to cock a crossbow.

## Fight From Ground

Rank special
This technique reduces the penalty for fighting from knees or ground by 1 per rank for the round.

## Flying

## Rank 2

This technique allows the martial artist to make an action in air without penalty. This is usually combined with Jump to attack a high target, or to attack while in mid-air jumping over obstacles.


## Greased Lightning

## Rank 2

This technique, when combined with Lightning, increases the martial artist's SR by two.

## Grip

Rank 1
This technique allows any Punch or Grapple defensive action to be declared to establish a grapple hold on a special success. The strength of such a hold is determined using the martial artist's base grapple damage.

## Harden Fist

Rank 3
This technique converts the Crush damage from punching an armored opponent into Stun and reduces it by Rank. This technique can only be learned if the martial artist already knows the Toughen Fist technique.

## Hat Flap

Rank 4
This technique is the same as Consternate except that it operates at range using PRE for POW and requires a hat to use. This technique can only be learned if the martial artist already knows the Consternate technique.

## Hypnotize

## Rank 5

This technique forces the target into inaction for a number of rounds equal to the level of success in a POW/POW roll, starting with the one in which this technique was performed. If performed later than SR 4 the target is unable to act for the rest of that round and the next round counts as the first round of inaction. Using this technique is a combat action. This technique can only be learned if the martial artist already knows the Distract technique.

## Inner Strength

## Rank 5

This technique adds Meditation skill rank (skill level with meditative focus) to the martial artist's STR for the duration of the round. This effect is cumulative with Kiai.

## Instant Aim

## Rank 4

This technique, when combined with Quick Aim, allows the martial artist to take an immediate long aimed shot using a weapon specified when the technique is learned without taking any time to do so. This technique can only be learned for skills for which the martial artist already knows the Quick Aim technique.

## Joint Strike

Rank 3
This technique allows the martial artist to declare an attack already targeted against a limb to be for the joint. If at least one point of damage is done past
armor then the effect is like that of a serious, impairing wound until all damage from the injury is healed.

## Jump Behind

## Rank 3

This technique allows the martial artist to flip over his opponent, landing behind and facing, in a single SR. A roll against Acrobatics or Jump is required to determine how the martial artist landed. A martial artist using the Jump skill must always spend an action regaining his bearings regardless of his level of success, though failures are interpreted as for Acrobatics. Obviously this maneuver cannot be attempted if there is not sufficient room above the opponent for jumping over.

## Kiai

## Rank 1

The sudden expulsion of air from the diaphragm is the outward expression of a strengthening and projecting of spirit. This has the effect of adding one-third the martial artist's POW (full POW if the martial artist has a meditative focus on doing so) to his STR for the action being attempted in concert with the kiai. This will increase damage with melee or thrown weapons and increase the range of thrown weapons. The blowpipe damage and range are also increased, even though they are not based on STR. As the boost to STR is for a single action it is limited to that action. For example, if kiai is done

## Jump Behind

Success Acrobatics
Normal Land ready to act.
Miss Land on balance, but must take one action regaining bearings before initiating action.
Failure Land off balance, 6 penalty until end of round. Must take one action following round to regain bearings before initiating action.
Fumble Fall down, take fall as from 10 foot height.
Fumble ${ }^{2}$ Fall down, take fall as from 20 foot height.
Fumble ${ }^{3}$ Fall down, take fall as from 30 foot height.
to increase the damage done by a punch it is only in effect for the SR in which the punch is done. If the action has an implicitly longer duration, such as lifting a boulder, the effect can last as long as 5 SR but no longer and cannot transfer to another action.

## Leap <br> Rank 3

This technique increases the martial artist's jump distance in feet by Martial Arts Level.

## Lightning

Rank 1
This technique, when applied to an action, allows it to be done more quickly. It effectively adds 1 to the martial artist's Strike Rank.

## Move Behind

## Rank 5

This technique allows the martial artist to move behind and be facing his opponent in a single SR, even if the only possible passage is through the opponent's hex, without incurring an opportunity shot against himself and without breaking any melee engagement against the opponent whose hex is being moved through. However, using this technique uses up three of the martial artist's movement points for the round. The martial artist must already know Move Past to learn this technique.

## Move Past

## Rank 3

This technique allows the martial artist to move through his opponent's hex in a single SR without incurring an opportunity shot against himself. However, using this technique uses up three of the martial artist's movement points for the round and breaks any melee engagement.

## Nerve Strike

## Rank 4

This technique allows Grapple or Punch to be targeted at a nerve bundle. Note that this can be targeted at a location determined by opportunity, but the technique must (as usual) be declared at the beginning of the round. However, if the target is wearing armor then this technique has no effect. If at least one point of stun or damage is done then the location is immediately numbed to the extent that it cannot be used. The effect is like that of a serious
wound and lasts for as long as there is any stun remaining from the attack.

## Off Hand Weapon

## Rank 1

This technique allows the same skill to be used when wielding a weapon in each hand. The weapon in the off-hand can only be used to make defensive actions. The weapon skill to be used with this technique must be specified when it is learned.

## Paralysis Strike

## Rank 5

This technique freezes the struck location in its current position (though an enterprising martial artist can use this technique on an already paralyzed location to pose it as desired). Although this effectively prohibits use of the location this does not act like a serious wound. For example, paralyzing the head will prevent the target from speaking, but will leave him conscious. This technique can only be learned if the martial artist also knows Nerve Strike and like that technique can only be used with the Grapple or Punch skills on unarmored opponents.

## Parry

## Rank 3

This technique, when combined with Block or Riposte, allows the martial artist to parry any weapon using the specified skill. The parry value is equal to Martial Arts Level. Such a defense can be declared as deflect (or riposte, if combined with that technique). This technique can only be learned for skills for which the martial artist knows Block or Riposte.

## Perfect Aim

## Rank 5

This technique, when combined with Instant Aim, allows the martial artist to reduce the peanlty of an aimed shot by 6 using only one action when using a weapon specified when this technique is learned. This technique can only be learned for skills for which the martial artist knows Instant Aim.

## Precision Strike

## Rank 3

This technique allows the martial artist to declare a Grapple or Punch attack with the Called Shot modifier against a specific sublocation. The Death

Touch technique requires the throat sublocation to be effective. Nerve Strike and Paralysis Strike techniques only affect the location from the sublocation to the extremity.

## Provoke

## Rank 1

This technique allows the martial artist to give the opponent a mortal insult using verbal and/or nonverbal communication. This attempt is resolved at the beginning of the round by forcing the opponent to make a Discipline/POW saving throw. If the opponent is unsuccessful he must attack the martial artist in that round.

## Quick Aim

## Rank 3

This technique allows the martial artist to immediately have a short aim using the weapon specified when the technique is learned. Aiming for one action earns a long aim. Note, this technique must be used separately for each ranged attack to be made in the round.

## Quick Engagement

## Rank special

This technique allows the martial artist to engage an opponent more quickly when employing a melee weapon skill taught by the style, reducing the engagement penalty by this technique's rank. For example, if the martial artist engages an opponent on SR 8 and declares the use of Quick Engagement 3 then the penalty of 4 SR is reduced to 1 SR . There is no benefit to using a Quick Engagement technique of a rank higher than then SR penalty. Quick Engagement can be declared multiple times in a round to engage multiple opponents but the engagements must be in series (barring the use of rune powers, of course). To learn this technique at a given rank it must first be learned at a previous rank. In other words to learn Quick Engagement 3 requires that Quick Engagement 1 and Quick Engagement 2 already be learned. Also, this technique cannot be learned to a rank higher than the lesser of the martial artist's Tactics rank ande Meditation rank.

## Redirect

Rank 2
This technique allows the martial artist to redirect his opponent's movement in such a way that it adds to the force of any Grapple action. If the opponent is running then the opponent's Mv score is added to grapple "damage." If the opponent made an unsuccessful attack then damage is rolled (interpreting a miss as a normal success, a failure as a special success and fumbles as the same degree of critical) and added to the grapple "damage."

## Reflect Missile

## Rank 5

This technique is the same as Deflect Missile except that if the level of defense exceeds that of the attack the missile is reflected back at the attacker with an effective level of success equal to the difference. Note that this technique will only reflect a missile which was no worse than a Miss, otherwise the missile did not pass close enough to the martial artist to be affected. The skill to be used with this technique is specified when it is learned. This technique can only be learned for skills for which the martial artist already knows the Deflect Missile technique.

If this technique is known for a ranged attack then the provision of requiring no worse than a Miss is waived, but for purposes of determining the effective level of success in the reflected attack a Failure is a Normal, a Fumble is a Special, a Fumble ${ }^{2}$ is a Critical and so on.

## Reversal

## Rank 4

This technique allows the martial artist to take an opponent's bonuses to STR (from Kiai and Inner Strength) for himself. The opponent loses any benefit from the Kiai or Inner Strength if it is successfully reversed. This technique can be countered if the opponent knows this technique or Inner Strength, declares its use to counter, and has the same or greater Meditation skill rank. This technique can only be learned if the martial artist knows the Blend technique.

## Rile Up

Rank 3
This technique allows the martial artist to provoke an individual into attacking. This is resolved by the person making a Discipline/Stūjitsu skill score saving throw at the beginning of the round. If unsuccessful the person must engage the martial artist and attack with brawl only for a number of rounds equal to the level of success. This technique can only be learned if the martial artist already knows Provoke.

## Riposte

Rank 2
This technique is the same as Block except that the martial artist can declare to defend for riposte.

## Roll

## Rank 2

This technique allows the martial artist to roll with a throw or fall such that he gains his feet automatically. In fact, this technique can be used in any similar situation, such as with Jump Behind. It can only be learned if the martial artist already knows Fall.

## Roundhouse Slap

Rank 3
This technique allows the martial artist to Face Slap up to three opponents if they are in the front facing. This technique cannot be combined with other attack maneuvers such as Belly Bounce or Eye
Poke. This technique can only be learned if the martial artist already knows Face Slap.

## Run Up Wall

Rank 3
This technique allows the martial artist to move up and along a wall or other surface at his normal movement rate for up to Martial Arts rank SRs. For example, a martial artist at rank 3 and having Mv 10 using this technique could run up to the top of a 10 foot wall in a single SR and then continue down the wall in subsequent SRs. If the martial artist does not return to a level surface before the effect of this technique ends he will fall.

## Spin Kick

Rank 3
This technique is used to put the power of the body behind a kicking attack, effectively doubling adjSTR.

## Spinning Slap

## Rank 5

This technique allows the martial artist to Face Slap everyone with reach regardless of facing. This technique can only be learned if the martial artist already knows Roundhouse Slap.

## Sweep Kick

## Rank 3

This technique uses a kick to knock the opponent's feet from under him. Damage is rolled normally, but instead of causing an injury damage rolled plus Martial Arts Level is matched against the opponent's AGI to knock him down.

## Success Opponent...

Critical falls to ground, takes 5' falling damage
Special falls to ground
Normal falls to one knee
Miss
Failure is unaffected
Fumble is unaffected, martial artist staggered

## Sweep

Rank 3
This technique allows the martial artist to use a sweep with the weapon specified when the technique is learned to knock the opponent's feet out from under him as per the Sweek Kick technique.

## Take Weapon

Rank 5
This technique allows the martial artist to take possession of a weapon from an opponent using a Punch or Grapple skill (specified when the technique is learned). This technique can only be learned for skills for which the martial artist already knows the Disarm technique. The result of the skill roll is interpreted as follows:

## Success Result

Critical ${ }^{2}$ Weapon is ready for immediate use
Critical Weapon can be used after 5 SR
Special Weapon can be used next round
Normal Weapon is dropped in opponent's hex

## Throw

Rank 5
This technique allows the martial artist to throw the weapon specified when the technique is learned
such that he can make a single attack with it using the appropriate melee skill. The range of this attack is 5 hexes. Because it is considered to be a melee attack there is no adjustment for range.

## Toughen Fist

## Rank 1

This technique converts the Crush damage from punching an armored opponent into Stun.

## Triple Punch

## Rank 3

This technique, when combined with Double Punch, allows the martial artist to make three Punch attacks with the same action against a single opponent, and thus in the same SR. This technique costs the martial artist 2 FP (in addition to the 1 FP for Double Punch).

## Two Weapon

## Rank 3

This technique allows the martial artist to wield two weapons simultaneously. Note this technique does not grant any skill (to use a weapon in the off hand requires a separate skill or the use of the Off Hand Weapon technique), it just allows full utilization of both weapons. The weapon skill for each hand to be used with this technique must be specified when it is learned.

## Utilize

## Rank 5

This technique allows the martial artist to take an opponent's bonuses to STR (from Kiai and Inner Strength) for himself. The opponent loses any benefit from the Kiai or Inner Strength if it is successfully utilized. In addition this technique adds the opponent's presence to the martial artist's STR for the duration of the round. This technique can be countered if the opponent knows this technique or Inner Strength, declares its use to counter, and has the same or greater Meditation skill rank. To learn this technique requires the martial artist know Reversal.

## Zanshin

Rank special
This technique allows the martial artist to defend normally against an attack which he would not normally be able to defend against due to lack of
tactical awareness. The martial artist is not able to track the opponent, only defending normally against attacks as if the opponent were being tracked. The number of opponents who can be defended against in round in this manner is equal to the technique's rank. To learn this technique at a given rank it must first be learned at the previous rank. In other words to be able to defend against three additional opponents requires the martial artist to learn Zanshin 1, Zanshin 2 and Zanshin 3 in that order, though only Zanshin 3 need be utilized to do so. Also, this technique cannot be learned to a rank higher than the martial artist's Meditation rank. Consequently a martial artist cannot even learn Zanshin 1 until his Meditation skill is at least 6 .

## Zazen

Rank special
This technique allows the martial artist to suppress his effective presence by Meditation rank times the highest rank of this technique employed. To use this technique at a given rank the previous rank must also be used. For example, a martial artist knowing Zazen 1, Zazen 2 and Zazen 3 having a Meditation rank 3 could suppress his presence by 9 POW points. To learn this technique at a given rank it must first be learned at the previous rank. In other words to learn Zazen 3 requires the martial artist to first learn Zazen 1 and Zazen 2.

## Meditation

Once a martial artist reaches Rank 5 he can awaken special abilities through meditation. To do so requires a week of meditation in an appropriate place at the end of which time a Meditation skill roll is made. If the martial artist is successful then he awakens an ability. It is up to the referee to determine what the ability is. Generally, only one ability can be awakened each year. To use a special ability requires a meditative focus on that power.

## Blind Fighting

The martial artist can fight with his eyes closed and gets no penalty to offensive actions. This effectively removes any penalties to hit caused by (lack of) visibility.

## Explode Heart

The martial artist can kill an opponent by using a Punch attack if he succeeds in a WIL + POW/CON roll. Death is instant for quadruple criticals, the following SR for triple criticals, one "action" later for double criticals, end of the following round for criticals, at the end of the second following round for specials and after a minute for normal successes.

## Fight From Ground

The martial artist has no penalty for fighting from knees or ground.

## High Jump

The martial artist is able to jump twice as high or twice as far.

## Ki Extension

The martial artist can substitute Target skill for the normal skill for use with Deflect Missile, Disarm, Reflect Missile and any other technique that can be replicated by focused manipulation of ki at close ranges. Disarm can only be attempted against opponents no more than one hex away.

## Lightning Strike

Unless fighting another martial artist with this power, his Strike Rank will always be one higher than his opponent's (though never less than what it would have been otherwise).

## Nerve Touch

The martial artist's Nerve Strikes will last at least POW $\times 1$ minute, regardless of any healing.

## Perfect Balance

The martial artist never falls down from a fumble or because of a dodge attempt. There is no penalty for attempting more than one dodge in a round.

## Pierce Armor

The martial artist's Punch and Kick attacks penetrate (ignore) normal armor. That is, only magically enhanced armor points reduce the damage.

## Poison Touch

The martial artist is able to inflict wounds that cannot be healed. If he expends 1 MP when making an attack any resulting is "poisoned" and treated like necromantic damage.

## Power Fist

The martial artist is able to punch at a distance of up to $\mathrm{POW} \times 1$ foot.

## Powerful Kiai

The martial artist always gains full POW from kiai, and with a meditative focus can get double POW.

## Silent Kiai

The martial artist can use the kiai technique without making a sound.

## Speed

The martial artist pays no extra FP for Double or Triple techniques.

## Toughness

The martial artist is able to absorb some of the energy of blunt attacks. The effect is to have AP equal to Martial Arts skill rank versus stun, brawl or crush damage.

## Vanish

The martial artist can completely suppress his POW at will. However, while suppressed he cannot use kiai, inner strength or utilize techniques. If the martial artist has a meditative focus on using this power with Hide then, while successful in the Hide skill, he is invisible. Similarly it can be used with Sneak to be inaudible.

## Aikido

| Block [Grapple] | Riposte [Grapple] | Parry [Grapple] |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
| Fall | Roll |  |  |  |
| Grip |  |  |  | Inner Strength |
|  |  |  |  |  |
| Kiai |  |  |  |  |
| Lightning | Greased Lightning |  | Utilize |  |
|  | Redirect | Blend | Reversal | Zanshin 5 |
| Zanshin 1 | Zanshin 2 | Zanshin 3 | Zanshin 4 |  |

## Bojutsu

| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Deflect Missile* |  | Reflect Missile* |
|  |  | Disarm* |  |  |
| Kiai |  |  |  |  |
| Lightning | Greased Lightning | Double Strike* |  |  |
| Quick Engagement 1 | Quick Engagement 2 | Quick Engagement 3 | Quick Engagement 4 | Quick Engagement 5 |
|  |  | Sweep* |  |  |
|  |  |  |  | Throw* |
| Zanshin 1 | Zanshin 2 | Zanshin 3 | Zanshin 4 | Zanshin 5 |

## Jojutsu

| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Deflect Missile* |  | Reflect Missile* |
|  |  | Disarm* |  |  |
|  | Fast Draw* |  |  |  |
|  | Flying |  |  | Inner Strength |
|  |  |  |  |  |
| Kiai |  |  |  |  |
| Lightning | Greased Lightning | Double Strike* |  | Throw* |
| Off Hand Weapon* |  |  |  |  |
|  |  | Two Weapon* |  |  |
|  |  | Zanshin 3 | Zanshin 4 |  |
| Zanshin 1 | Zanshin 2 |  |  |  |

Judo

| Block* |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
|  |  | Disarm* |  |  |
| Fall | Roll |  |  |  |
| Fight From Ground 1 | Fight From Ground 2 | Fight From Ground 3 | Fight From Ground 4 | Fight From Ground 5 |
|  |  |  |  | Inner Strength |
| Kiai |  |  |  |  |
| Lightning | Greased Lightning |  |  |  |
|  | Redirect |  |  |  |
| Zanshin 1 | Zanshin 2 | Zanshin 3 | Zanshin 4 | Zanshin 5 |

## Kali

| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Deflect Missile* |  | Reflect Missile* |
|  |  | Disarm* |  |  |
| Entangle 1 | Entangle 2 | Entangle 3 | Entangle 4 | Entangle 5 |
|  | Fast Draw |  |  |  |
|  |  |  |  | Inner Strength |
| Lightning | Greased Lightning | Double Strike* |  |  |
| Off Hand Weapon* |  |  |  |  |
| Zanshin 1 | Zanshin 2 | Zanshin 3 | Zanshin 4 | Zanshin 5 |

## Kenjutsu

| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Deflect Missile* |  | Reflect Missile* |
|  | Fast Draw* |  |  |  |
|  | Flying |  |  |  |
|  |  |  |  | Inner Strength |
| Kiai |  |  |  |  |
| Lightning | Greased Lightning | Double Strike* |  | Throw* |
| Off Hand Weapon* |  |  |  |  |
|  |  |  | Zanshin 5 |  |
|  |  | Zanshin 3 | Zanshin 4 |  |
| Zanshin 1 | Zanshin 2 |  |  |  |

## Tim Doty

Kung-Fu

| Backflip |  | Backflips |  | Backflip Sprint |
| :--- | :--- | :--- | :--- | :--- |
| Block* |  |  |  |  |
| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
|  |  | Deflect Missile* |  | Reflect Missile* |
|  |  | Disarm* |  |  |
| Fall | Roll | Leap |  |  |
|  | Flying |  |  | Inner Strength |
|  |  | Jump Behind |  |  |
|  |  |  |  | Move Behind |
| Kiai | Greased Lightning |  |  |  |
| Lightning |  | Move Past |  | Zanshin 5 |
|  |  | Run Up Wall |  | Zanshin 4 |
| Zanshin 1 | Zanshin 2 | Zanshin 3 |  |  |

## Kyūjutsu

| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Deflect Missile* |  | Reflect Missile* |
|  |  | Disarm* |  |  |
|  | Fast Draw* |  |  |  |
| Kiai |  |  |  |  |
| Lightning | Greased Lightning | Double Strike* |  | Perfect Aim* |
|  |  | Quick Aim* | Instant Aim* |  |

Masaki Ryu

| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Deflect Missile* |  | Reflect Missile* |
|  |  | Disarm* |  |  |
| Entangle 1 | Entangle 2 | Entangle 3 | Entangle 4 | Entangle 5 |
|  | Fast Draw* |  |  |  |
|  |  |  |  | Inner Strength |
|  |  | Joint Strike |  |  |
| Kiai |  |  |  |  |
| Lightning | Greased Lightning | Double Strike* |  | Throw* |
|  |  |  |  | Zanshin 5 |
| Zanshin 1 | Zanshin 2 | Zanshin 3 | Zanshin 4 |  |

Scuola Magistrale

| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Deflect Missile* |  |  |
|  |  | Disarm* |  |  |
|  | Fast Draw* |  |  |  |
|  | Flying |  |  | Inner Strength |
|  |  |  |  |  |
| Lightning | Greased Lightning | Double Strike* |  | Throw* |
| Off Hand Weapon* |  |  |  |  |
|  |  |  |  | Zanshin 5 |
|  |  | Two Weapon* |  |  |
| Zanshin 1 | Zanshin 2 | Zanshin 3 | Zanshin 4 |  |

## Shaolin

| Block [Punch] | Riposte [Punch] | Parry [Punch] |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
| Toughen Fist |  | Harden Fist |  |  |
|  |  |  |  | Inner Strength |
| Kiai |  |  |  |  |
| Lightning | Greased Lightning |  | Nerve Strike | DeathTouch/ <br> Paralysis Strike |
|  |  |  | Eye Pluck |  |
|  |  | Precision Strike |  | Zanshin 5 |
| Zanshin 1 | Zanshin 2 | Zanshin 3 | Zanshin 4 |  |

## Shinobi

| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Deflect Missile* |  | Reflect Missile* $^{*}$ |
|  | Fast Draw* |  |  |  |
|  |  |  |  | Inner Strength |
| Kiai |  |  |  |  |
| Lightning | Greased Lightning |  |  |  |
|  | Redirect | Blend |  |  |
|  |  | Run Up Wall |  | Zanshin 5 |
| Zanshin 1 | Zanshin 2 | Zanshin 3 | Zanshin 4 | Zazen 5 |
| Zazen 1 | Zazen 2 | Zazen 3 | Zazen 4 |  |

## Tim Doty

## Stūjitsu

| Absorb Damage 1 | Absorb Damage 2 | Absorb Damage 3 | Absorb Damage 4 | Absorb Damage 5 |
| :--- | :--- | :--- | :--- | :--- |
|  | Belly Bounce |  |  |  |
| Block [Brawl] |  | Parry [Brawl] |  |  |
| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
|  | Consternate |  | Hat Flap |  |
| Distract |  |  |  | Hypnotize |
|  | Eye Poke |  | Double Eye Poke |  |
| Face Slap |  | Roundhouse Slap |  | Spinning Slap |
| Fall | Roll |  |  |  |
| Provoke |  | Rile Up |  |  |

Taekwondo

| Combo 1 | Combo 2 | Combo 3 | Combo 4 | Combo 5 |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Disarm* |  | Take Weapon* |
|  | Double Kick |  |  |  |
|  | Double Punch | Triple Punch |  |  |
|  | Flying |  |  | Inner Strength |
|  |  |  |  |  |
| Kiai |  |  |  |  |
| Lightning | Greased Lightning |  |  |  |
|  |  | Joint Strike |  |  |
|  |  | Spin Kick |  | Zanshin 5 |
| Zanshin 1 | Zanshin 2 | Zanshin 3 | Zanshin 4 |  |

## Р8чсніс8

With sufficient effort anyone can harness the power of the mind to control the world around them. The extent of that power is determined by three things: the character's POW, Channel skill and skill in the psychic discipline being exercised. Each discipline is a separate Very Hard Mental skill.

Psychic powers are not magic, they are the natural power of the mind. Their use is not detectable as magic, nor do any protections against magic apply. Despite this the Channel skill is useful in channeling psychic power for better effect.

## Power

A character's psychic power, abbreviated pPOW, is determined by how much of the character's POW is asserted and her skill in the psychic discipline in question. A character's pPOW increases significantly with mastery, the skill score being added to POW to find the maximum pPOW. Thus a character with POW 14 and having Sniffer 16 has a maximum pPOW 30 when using the Sniffer discipline.

A psychic's effective pPOW is reduced over distance in the same fashion as PRE. Consequently if a psychic is exerting herself sufficient to have pPOW 12 then she will have effective pPOW 12 when touching the target of her discipline, but only effective pPOW 3 when the target is ten feet away.

If the psychic has a meditative focus on channeling the discipline being used then she gets benefit from having Channel. Specifically a psychic is more able to effectively channel her pPOW such that she gets an additional Channel skill rank points per effective point of pPOW. This cannot increase the effective pPOW above maximum pPOW. For example, a psychic with Channel 8 and maximum pPOW 30 who exerted 25 pPOW while having a meditative focus on channeling for that discipline would have an effective pPOW 30 when touching the target and effective pPOW 20 at fifteen feet.

## Control

A psychic's control over the psychic power is determined by the skill for that discipline. When psychic power is exercised a skill roll is required. A miss indicates that the power was active, but not controlled. This could mean that the power affected a different target, or that the target was correct, but the power misapplied in such a way as to have no effect. With some disciplines, especially pyrokinesis, having a high pPOW and low skill can be quite dangerous.

For continuing powers, like Shield, a roll is only required at the beginning of the power application and not again until it has lapsed and the psychic tries to use her power again. If the psychic has a meditative focus on the discipline in question there is a 6 bonus to the control roll. There is an additional 6 bonus when using psychic power on oneself or when using a power on a visible target.

A target will feel any use of a psychic power as a brush against his mind if the psychic succeeds or rolls a miss. A target does not sense the mind of the psychic if the roll is a failure or fumble. A psychic fumbles an attempt to control a power is unable to try again for a length of time determined by the level of fumble. A single fumble means no psychic disciplines can be used for one round, a double fumble indicates one minute, a triple fumble one hour and a quadruple fumble for an entire day.

A psychic can try to be subtle to avoid detection. In such a case there is a 10 penalty to the skill roll, but the target only feels a brushing against his mind if the psychic misses the attempt-successful attempts are not detected.

For a psychic to attempt to use a power on a target there must be something to specify, identify or otherwise differentiate the target from other minds. In general if the target cannot be seen then Telelocate must be used to find him or suffer a penalty. For example, by voice over an intercom, feeling the brush of another mind (as in a missed attempt by another psychic), by name (as of a friend or acquaintance), and so on. The penalty in such cases usually ranges from 6 to 10 . Without use of Telelocate it is impossible to determine if an adjacent room whose contents the psychic cannot

perceive is occupied and thus individually target its inhabitants.

It is entirely possible that the psychic doesn't know how far away the target is. The psychic must specify the pPOW exerted with the attempt automatically failing if the target is not within range. On a successful control roll the psychic will know that the target was out of range.

## Fatigue

Using psychic disciplines is physically draining. For every five pPOW that are actually exerted (as opposed to effective at a given distance) the psychic incurs 1 FP. Fractional FP should be rounded as desired by the referee. This follows the normal fatigue rules for accumulating long term fatigue and for recovery from fatigue. Passive skills only incur fatigue every skill level minutes.

For example, a psychic with POW 14, Sniffer 15 and Channel 8 could exert all 29 pPOW incurring nearly 6 FP each time for, at fifteen feet, pPOW 7 without a meditative focus and pPOW 14 with a meditative focus on channeling Sniffer. Or the psychic could, with a meditative focus on channeling Sniffer, choose to exert 16 pPOW (incurring just over 3 FP each time) and still be able to muster pPOW 2 at 250 feet.

The FP cost is reduced by the psychic's skill rank, though it can never be below one fifth FP. Such fractional FP only count as a full FP when five have accumulated to make a full point. Thus a psychic with skill score 15 in a discipline exerting 25 pPOW would have a base accumulation of 5 FP , reduced to 3 FP for being skill rank 2 .

Finally, the FP cost is reduced by each level of critical success achieved in controlling the discipline. This can reduce the cost of active disciplines to 0 FP but passive disciplines still cannot be reduced below one fifth FP.

## Disciplines

The following list catalogs the standard psychic disciplines available in Rune Master. There are three types of disciplines: physical, mental and projection. Physical disciplines cause some physical


## Broadcast

Some disciplines can be broadcast and affect everyone within range-the psychic cannot discriminate and only apply the discipline to some and not others. Further, broadcasting is more fatiguing and difficult to do. The psychic must spend two extra FP (which FP reduction from skill can compensate for) and has her maximum pPOW reduced by 10.

So a psychic with POW 15 and skill score 20 in her discipline can exert no more than $p P O W$ 25, and that will cost 5 FP +2 FP for broadcasting - 3 FP for skill level, or 4 FP to do so whereas unicasting for the same FP she could exert pPOW 35.
effect, mental disciplines affect the mind and projection disciplines are a projection of the psychic's mind.

A character trying to awaken a psychic discipline must spend time pondering it. The older and less flexible the mind the more time must be spent. The amount of time is determined as for a fifth degree of mastery using WIT against a resisting score found as follows. If the psychic already knows a discipline of the same general and specific type, e.g., projection/perception, then the difficulty is equal to age in years. If the psychic only knows a discipline of the same general type, e.g, projection, then the difficulty is equal to age times two. If the psychic knows at least one discipline, but none are of the same basic type as the one to be learned then difficulty is equal to age times three. Otherwise the difficulty is equal to age times five. Until the character has spent at least 1 EP on a discipline there is no chance of success in using it.

For example, a character who is 25 years old and knows the Clairaudience psychic discipline would have a difficulty of 25 when trying to awaken Astral Projection.

## Difficulty of Awakening

| Diff | Description |
| :---: | :--- |
| Age | Type and subtype match |
| $\times 2$ | Type match |
| $\times 3$ | Other discipline known |
| $\times 4$ | No other psychic disciplines |

Age Type and subtype match
$\times 2$ Type match
$\times 3$ Other discipline known
$\times 4 \quad$ No other psychic disciplines


## Astral Projection

Projection (Perception)
This discipline allows the psychic to project her spirit from her body. The psychic's movement rate is equal to the pPOW for how far the body is removed from the spirit. If the psychic fails to exert herself sufficiently to have at least effective pPOW 1 for any reason while the spirit is out of the body then it becomes stranded and the psychic goes unconscious leaving her body in a coma.

The movement rate depends on pPOW in the strike rank the psychic starts the movement in. For example, after exerting this power a psychic with pPOW 20 would have Mv 20. If she then moved twenty feet in a strike rank she would be reduced to an effective pPOW 4 and thus only have Mv 4.

There are limits to where the spirit can go: moving through solid matter is very disorienting and requires an Astral Projection skill roll to navigate. Each level of success gets the psychic through five feet of matter. While astrally projected the psychic sees and hears from wherever her spirit is. In fact, while projecting the psychic has no sensation from her body at all.

If the body was not left in a state of repose it will collapse like a puppet whose strings have been cut. This is to be avoided if at all possible as constriction can occur cutting off blood flow and starving tissue of oxygen. Depending on the position of the body, the referee may impose damage at a periodic rate. Normally this is stun until a serious wound level is reached, then real damage begins to accumulate. A reasonable rate is one point per

> Special Success
> The effect of a special success when controlling a psychic discipline depends on the discipline in question. A discipline that is exclusively active, as indicated directly following the discipline's type, has effective pPOW doubled. When combined with Channel this effectively adds one to Channel rank. A discipline that is always passive, as indicated directly following the discipline's type, only incurs FP every skill score minutes. All other disciplines are treated as passive instead of active and so only incur FP every skill rank minutes.
minute for normal constriction from a collapsed body.

## Body Weapon

## Physical (Body)

This discipline allows the psychic to transform a hand, possibly including forearm, into a blade. The reach of the blade and its adjSTR depend on the pPOW exerted. To wield the body weapon the psychic uses Knife skill for close reach and Sword 1H for the others.

| pPOW | Reach |  | adjSTR |
| :--- | :--- | :--- | :--- |
| $3-8$ | C | 0.6 |  |
| $9-17$ | S | 0.8 |  |
| $18-29$ | M | 1.0 |  |
| $30-44$ | L | 1.2 |  |
| $45-62$ | P | 1.4 |  |
| $63-80$ | X | 1.6 |  |

## Boost

Projection (Meta)
This discipline allows the psychic to boost the effective pPOW of another psychic. The amount of gain is equal to this psychic's effective pPOW at the beneficiary. Multiple psychics can boost the same target for added effect. The increase obtained by the target can exceed her maximum pPOW. Note that the additional effective pPOW are added to the target psychic's effective pPOW regardless of whether or not the target desires to have the boost.

## Cause [Emotion]

## Mental (Domination)

 Active, BroadcastThis discipline allows the psychic to project the specified emotion (elation, fear, peace, rage, relief) and is different for each emotion. The net effect of

| Resisting Emotion |  |
| :--- | :--- |
| Success | Duration |
| Critical $^{3}$ | 10 minutes |
| Critical $^{2}$ | 3 minutes |
| Critical | 1 minute |
| Special | 3 rounds |
| Normal | 1 round | feeling the emotion is a generalized penalty of up to effective pPOW, though this penalty may be reduced if the action being attempted is aligned with the emotion. A Discipline skill roll with difficulty equal to effective pPOW can temporarily remove the penalty by mastering the emotion.



## 

## Clairaudience

## Projection (Perception)

This discipline allows the psychic to hear as if she were located elsewhere. To do so requires that the psychic have an effective pPOW of at least 1 at the intended sensory locus. The maximum Listen score is equal to effective pPOW.

The psychic can choose either a point or a creature as the target of this power. A point in space is stationary while a creature target means the psychic can "ride along" with some person or creature, hearing through its ears. This gives the advantage (or disadvantage) of using the hearing acuity of the person or creature being "ridden" instead of the psychic's own hearing acuity modifier. Once this power is active the psychic's hearing will remain channeled through the target with no additional skill rolls needed, even if the target moves. However, the psychic must constantly exert sufficient pPOW to maintain effective pPOW 1 or higher at the target.

## Clairvoyance

Projection (Perception)
This discipline allows the psychic to see as if she were located elsewhere. To do so requires that the psychic have an effective pPOW of at least 1 at the intended sensory locus. The maximum effective Scan, Search or Track score is equal to effective pPOW.

The psychic can choose either a point or a creature as the target of this power. A point in space is stationary while a creature target means the psychic can "ride along" with some person or creature, seeing through its eyes. This gives the advantage (or disadvantage) of using the vision ranges of the person or creature being "ridden" as well as the definite disadvantage of only being able to look where the target looks. Once this power is active the psychic's vision will remain channeled through the target with no additional skill rolls needed, even if the target moves. However, the psychic must constantly exert sufficient pPOW to maintain effective pPOW 1 or higher at the target.

## Damper

## Projection (Meta)

This discipline reduces the effective pPOW of any psychic discipline other than Damper by its own effective pPOW. Thus the effect of multiple psychics using this discipline is cumulative. At skill rank 3 the psychic can restrict the damping effect to only, or all but, a single general type of discipline (mental, physical or projection). At skill rank 4 the psychic can restrict the damping only or all but a single specific type of discipline and at skill rank 5 the psychic can restrict the damping to only, or all but, a single specific discipline. The last case is the only way to dampen another psychic's use of this discipline.

## Danger Sense

Mental (Information) Passive
This discipline alerts the psychic to imminent danger. In practice it alerts the psychic of an attack she would not otherwise be aware of if the source of the attack is at effective pPOW 1 or greater. However, the warning is last minute and only allows the psychic to defend normally, albeit with a penalty of 10 less effective pPOW. Thus at effective pPOW 10 or greater there is no penalty. For each full 10 effective pPOW the psychic has one SR lead time, though making use of it gives a penalty equal to 10 , less the amount effective pPOW exceeds the requirement.

For example, at effective pPOW 25 the psychic could start acting 2 SR before the attack, but any skill roll in that first SR would be at a penalty of 5 . However, by expending 1 FP a weapon could be readied and used to parry the attack without penalty. Note that the action doesn't have to be defensive: the psychic could instead take an offensive action or simply move away.

## Dimension Door

## Physical (Space)

This discipline allows the psychic to "step out" into an extra-dimensional space having a capacity in pounds equal to pPOW squared. On return the

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psychic occupies the same space as previously. If the space once occupied by the psychic is now occupied by someone or something else the psychic is "bounced out" of the space into the nearest unoccupied space of sufficient volume. Being "bounced" is very disorienting. The number of feet displaced is the penalty to any action attempted while the psychic regains her bearings. This penalty is reduced by Tactics skill level at the end of each round. The maximum distance that the psychic can bounce in this fashion is maximum pPOW in hexesif there is insufficient volume within that distance then the psychic dies with their mortal remains and personal effects lost in Limbo. This is an active discipline.

## Disintegrate

Physical (Space) Active
This discipline is only effective on objects, not creatures or spirits. With an object it causes it to crumble, melt and otherwise disintegrate to the extent determined by damage rolled for adjSTR equal to effective $\mathrm{pPOW} \times 0.5$. This discipline can only be used against a single target, it cannot be broadcast, and requires the Target skill to "hit" the target. As the discipline works directly on the object normal defenses have no effect-only protection from psychic powers such as the Shield discipline are efficacious.

## Doppleganger

Physical (Create)
This discipline allows the psychic to create a double, a perfect duplicate in every way except for having a cap on every attribute and skill equal to effective pPOW. Thus the farther away from the psychic the doppleganger goes the weaker it gets. When created the doppleganger "steps out of" the psychic. This allows confusion as to which is the psychic and which is the double. However the double does not act on its own initiative so to do anything with it generally requires the psychic to lie down and "sleep." On its own the double can manage static "actions" such as standing-but only so long as no skill or attribute roll is required.

| Dowsing |  |  |  |
| :---: | :---: | :---: | :---: |
| Eff. pPOW | minimum | Eff. pPOW | minimum |
| 1 | 4000 pounds | 21 | 4 pounds |
| 2 | 2800 pounds | 22 | 3 pounds |
| 3 | 2000 pounds | 23 | 2 pounds |
| 4 | 1400 pounds | 24 | $11 / 2$ pounds |
| 5 | 1000 pounds | 25 | 1 pound |
| 6 | 700 pounds | 26 | 11 ounces |
| 7 | 500 pounds | 27 | 8 ounces |
| 8 | 350 pounds | 28 | 6 ounces |
| 9 | 250 pounds | 29 | 4 ounces |
| 10 | 175 pounds | 30 | 3 ounces |
| 11 | 125 pounds | 31 | 2 ounces |
| 12 | 88 pounds | 32 | $11 / 2$ ounces |
| 13 | 63 pounds | 33 | 1 ounce |
| 14 | 44 pounds | 34 | $3 / 4$ ounce |
| 15 | 32 pounds | 35 | $1 / 2$ ounce |
| 16 | 22 pounds | 36 | $3 / 8$ ounce |
| 17 | 16 pounds | 37 | $1 / 4$ ounce |
| 18 | 11 pounds | 38 | 82 grains |
| 19 | 8 pounds | 39 | 55 grains |
| 20 | 6 pounds | 40 | 41 grains |

To effectively divide her attention between her real body and actions and that of the double requires a meditative focus on the task. However, in with the focus the referee should impose penalties as appropriate. For example, it is difficult to avoid both the psychic and her double reacting to bodily threats directed at either of them. This can throw off the balance and pace of the other, generally imparting a penalty of 6 .

## Dowsing [Material] <br> Projection (Perception)

This discipline allows the psychic to detect the approximate distance and direction to the nearest, largest deposit of the material. This skill is different for every material, such as water, crude oil, granite, gold and so on. The higher the effective pPOW the smaller the amount can be and still be detected. To determine what is detected consider what is closest and, if of sufficient quantity to be detected, then that is the material located. Otherwise the next nearest is considered, and so on. In the event that two deposits are equally near and detectable then the largest is

detected. If they are of the same size then the discipline detects both, but has direction and distance to neither. Each round the psychic keeps the discipline active allows discernment of the next nearest, largest deposit. Allowing the discipline to lapse force the psychic to start over.

## ESP

## Projection (Perception)

This discipline allows the psychic to "see" without her eyes. The maximum vision based skill score is equal to half effective pPOW. For example, if the psychic has Archery 15 and exerts 12 pPOW then her effective Archery skill is 6 regardless of illumination or lack thereof.

## Exhaust

Physical (Body)
Active
This discipline allows the psychic to cause others to become physically exhausted. It can be either broadcast to everyone within range, or unicast to a single target. A target incurs FP equal to half effective pPOW. Fractions are rounded down, but can accumulate. So effective pPOW 1 held over two rounds causes 1 FP to be incurred. If LFP plus FP exceeds twice the target's END then the target becomes effectively comatose with a base recovery rate of 1 FP per 15 minutes (so a target with END 15 would recover 2 FP per 15 minutes) until FP is reduced to twice END, at which point fatigue is recovered normally.

## Hallucination

Mental (Influence)
This active discipline allows the psychic to control what the victim, selected with Target skill, perceives as his surroundings. He can be made to see, hear, smell or feel things that aren't there, or not to see, hear, smell or feel things that are there. The efficaciousness of this discipline is determined by effective pPOW and the victim's WIT. A higher WIT is better able to notice and remark on discrepencies that creep in to the hallucination. Notice skill score can be substituted for WIT. If effective pPOW is less than $1 / 3$ WIT then the hallucinations
are dismissed by the victim without conscious thought or effort. An alert victim will, however, note that something is amiss. If effective pPOW is at least $1 / 3$ WIT but less than WIT the victim perceives the hallucinations as ghostly apparitions, but is effectively able to ignore them. In stressful situations a psychic who is actively manipulating the hallucinations in believable ways can cause the victim a penalty of up to 6 at the referee's discretion. If effective pPOW exceeds WIT then the hallucinations are very plausible and only careful examination clearly reveals the hallucinations for what they are. At this level real objects and creatures that are intended to be hidden are still visible, but ghostly. Just how a victim reacts depends to an extent on the victim. He may become uncertain as to what is real and freeze into inaction, or he may swing out against every phantom, or some other result.

## Heal

Physical (Body) Active
This discipline allows the psychic to heal wounds, cure illness and treat poison by touch. If successful the subject is healed of a number of points of damage equal to one-fifth effective pPOW. Necromantic damage is beyond the reach of this discipline.

Impairing and crippling wounds that have had all points of damage recovered can be healed with the required effective pPOW depending on the injury and the stage to be recovered. The minimum required effective pPOW is equal to three times the levels of success required to advance a stage times the number of weeks per roll. For example, to improve an impairing injury from first to second stage requires three times three levels of success times one week, or pPOW 9. To improve a crippling injury from third to fourth stage requires three times five levels of success times four weeks, or pPOW 60.

To effect the healing no less than the required pPOW can be expended at any one time and the total effective pPOW must be equal to 1000 divided
by CON times the number of levels of success required times the number of weeks. For example, a character of CON 12 with an impairing injury in stage one would require at least effective pPOW 9 each time for a total expenditure of 250 effective pPOW.

For a psychic with POW 15 and skill score 15 in this discipline she could, if touching the character to be healed, do so in as few as 9 rounds and expending 32 FP or as long as 25 rounds and expending 5 FP. With a maximum pPOW 30 she would be unable to completely cure the impairing injury, though she could take it from stage two to stage three in as few as 17 rounds for 66 FP or as long as 25 rounds for 50 FP .

This discipline can also be used to cure disease or treat poison. To reduce the level of effect of disease or poison by one level requires effective pPOW in a single usage equal to one plus the level of effect times the virulence of the disease or potency of the poison per usage with a total effective pPOW of that amount times one plus the level of effect being treated. Once the level of effect has been reduced to the point where the disease or poison has no continued effect the symptoms will recovery per the normal rules.

For example, to treat a character poisoned with curare of potency 20 at LOE 1 would require a

| Illusion |  |  |  |
| :--- | :---: | :--- | :---: |
| Size | Difficulty | Observant | adj |
| Miniscule | 1 | Distracted | -6 |
| Extremely Tiny | 2 | Alert | +6 |
| Very Tiny | 3 | Scrutinizes | +10 |
| Tiny | 4 |  |  |
| Very Small | 5 |  |  |
| Small | 6 |  |  |
| Medium Small | 8 |  | Bonus |
| Medium | 10 |  | 2 |
| Medium Large | 13 | Familiarity |  |
| Large | 16 | Seen before |  |
| Very Large | 20 | Met with before | 6 |
| Huge | 25 | Associates with | 10 |
| Enormous | 35 | Close Associate | 20 |
| Titanic | 50 | Very Close | 40 |
| Gargantuan | 75 | Intimate | 80 |

minimum of effective pPOW 40 with a total of effective pPOW 80 while treating basilisk poison of potency 30 at LOE 2 would require a minimum effective pPOW 90 with a total of effective pPOW 270. Strong poisons are often untreatable as they are inherently more difficult due to potency and usually attain higher levels of effect.

## Illusion

## Mental (Influence) Passive

This discipline allows the psychic to alter the perception of everyone within range for some specific thing. Because this discipline affects the way the mind perceives it has no effect on recording equipment.

The difficulty is determined by the size and complexity of the illusion. To create an illusion of an acorn is normally difficulty 2 as it is extremely tiny and simple. However an illusion of a two-ton acorn would be more difficult due to the size. In general the difficulty is determined by the size of the illusion and modified if the illusion is particularly complex.

The more pPOW exerted the more believable the illusion is. A successful Notice roll (with a penalty equal to effective pPOW ), made when first observing the target of this psychic discipline, penetrates the illusion. The roll is made at the beginning of every encounter and only during an encounter if some event occurs to call the illusion into question or suspicion. Note, someone who does not penetrate the illusion may still not believe in it due to the implausibility of it. For example, an illusion of a mountain floating above the ground is not very plausible.

Anyone who is particularly observant, such as an alert guard, has a bonus of 6 . Anyone who scrutinizes the illusion, such as a suspicious guard, has a bonus of 10 . If the psychic is doing an illusion to alter her appearance trying to masquerade as a particular person there is an additional bonus based on the observer's familiarity with the person being masqueraded as.



## Invert

Physical (Body)
Active
This discipline allows the psychic to rearrange the target's body in a destructive fashion, such as by turning it inside out. The net effect is to do damage for adjSTR equal to $0.5 \times$ effective pPOW. To direct this discipline against a target requires Target. Only defenses against psychic powers, such as Shield or Damper, are efficacious. This discipline effectively ignores armor whether physical or magical.

## Iron Will

## Projection (Meta)

This discipline firms the psychic's intellect such that WIL is increased. If the exerted pPOW is greater than WIL it is substituted for WIL in any WIL resistance roll.

## Leach

## Projection (Meta)

This discipline allows the psychic to draw energy from other psychics. The targeted psychic has her exerted pPOW reduced by the effective pPOW of this discipline. Moreover, every point of reduction restores 1 FP to the psychic with every fifth FP recovered in this fashion also restoring 1 LFP. Although this discipline fatigues the psychic to use, it can operate with an effective gain.

## Levitation

## Projection (Force)

This discipline can be used to lift with effective STR equal to effective pPOW. It is directed at an object so changing the target being lifted requires that the discipline be controlled all over again. This discipline cannot be directly applied to creatures or objects in their immediate possession. Generally the target must be "hit" with the Target skill. The psychic can move the lifting force's location, but only with Mv equal to skill rank in Levitation.

## Light

Physical (Create)
Allows creation of a point light source having IP equal to effective pPOW. Alternatively can broac-
cast to produce a passive "lightening" equal to effective pPOW. There is an intrinsic difference between the two: a point light source sheds light as expected for its IP, will cast shadows and so on. In contrast the passive lighting only illuminates the area it is in, casting no shadows and providing no illumination outside the bounds of effective pPOW. Psychically created light is considered "Plant" light.

## Mind Blast

## Mental (Domination)

## Active, Broadcast

This discipline is a raw, mental assault on another mind, tearing the psyche from its foundations and shredding it. The psychic's pPOW is matched against the target's WIL on the resistance table. Each level of success costs the target 1 MP and causes a distraction worth 1 penalty against any action. Every fifth level of success causes the temporary loss of 1 WIT and 1 POW. Every fifth point of temporary attribute loss is permanent.

If the resistance roll is a failure then there is a backlash against the psychic: this discipline by virtue of its linkage allows a powerful target to strike back at the psychic. On a miss there is no effect as both wills struggle futily and on a failure the target can choose to either sever the link (causing immediate termination of the power so the psychic, if she wishes to continue, must roll for control again) or can inflict the loss of 1d6 MP with an equal penalty to actions and every fifth point being a temporary loss of POW and WIT. Each level of fumble causes the loss of 5 MP with the accompanying 5 penalty with one point of temporary POW and WIT loss. Every fifth point of temporary attribute loss is permanent.

## Mind Blender

Mental (Domination)
Active, Broadcast
This discipline allows the psychic to disrupt the thoughts of a target. The power must be controlled for each new target, or if the power was allowed to lapse against a target and is being renewed. Once the power is successfully employed against a target
an attack can be made each round using the "spell casting" SR. This discipline can be broadcast in which case it only needs to be controlled the first round of the broadcast and everyone within range is assaulted.

## Mind Blender

| Success | Max Complexity |
| :--- | :--- |
| Critical $^{3}$ | Reflex |
| Critical $^{2}$ | Simple |
| Critical | Average |
| Special | Hard |
| Normal | Complex |
| Miss | Multiplex |
| Failure | Omniplex |
| Fumble | Transcendent |

A character hit with mind blender has his mind disrupted to an extent determined by the level of success in comparing effective pPOW to WIL. Note that a character who is steeling himself against the effect of this discipline can substitute Discipline for WIL or add Discipline skill level to WIL, using whichever is higher.

The disruption can prevent spell casting and, with a normal success or better, causes a penalty to any action equal to three times the level of success. This penalty is cumulative though the disruption of spell casting only lasts until the next effective pPOW versus WIL roll. When the penalty reaches a character's WIT he blanks out. When it reaches triple the character's WIT he goes into a coma.

A character can only recover once he is no longer under the influence of the power-even effective pPOW 1 is enough to prevent recovery. The penalty is reduced by one for each minute of recovery. A character who is in a coma is a special case: even after the power is no longer exerted the character cannot recover until he success in a WIT versus cumulative penalty roll. He gets one roll every day and, once he succeeds, the penalty is reduced by one per hour with consciousness being regained when the penalty drops below triple WIT.

Note, this discipline is only fully effective against sentient and parasentient beings and affects them whether they are corporeal or ethereal. Semisentients are affected as described except that they cannot be put into a coma and the maximum penalty is equal to triple WIT. Quasisentient beings cannot be put into a coma and the maximum penalty is equal to WIT. Non-sentients have a maximum

penalty equal to $1 / 3$ WIT and mindless creatures are completely unaffected.

## Mind Control

## Mental (Domination)

This discipline allows the psychic to control others. Once the power is successfully employed an attempt to control the target can be made once per round to the exclusion of all other activity. To establish control requires a successful match of effective pPOW against the WIL of the target. Each such assertion of control is an active use of this discipline.

Note that control does not grant the ability to read the mind of the target, nor does it allow any form of telepathy. The discipline does not connect the thoughts, just forces compliance with the psychic's will. The target is aware of the control, but unable to do anything about it while the psychic is dominant. The psychic is dominant while she has at least one level of control.

When controlling the target the psychic perceives through the target's senses, effectively precluding the psychic from making any actions of her own. To achieve the focus to simultaneously act and control the target requires a meditative focus on doing just that, but even so the senses impinge and, for example, the controlled target having to dodge an attack may cause the psychic to reflexively duck which may interrupt her own activity.

In short, even with the meditative focus there may be penalties to actions at the referee's discretion. A penalty of six is recommended in most stressful situations. If both the psychic and the target are in such then apply the penalty twice, once for each.

The level of control is equal to the level of success in the first effective pPOW/WIL roll. The psychic can choose on any following round to reinforce her position of dominance by again matching her effective pPOW against the WIL of the target but doing so is an active use of the discipline. Any levels of success are added to the level of control.

A target who is aware of the intrusion can resist by matching his WIL against the psychic's effective

pPOW with each level of success reducing the level of control by one. One such attempt is allowed each round and costs 1 FP , but in the meantime the target must do as the psychic directs. If the level of control or effective pPOW ever drops to zero the psychic loses control of the target.

A psychic is most effective in establishing control at short distances, particularly when touching the target, and so should try to establish as much control while in proximity as she can. On the flip side the greater the distance the easier it is for a target to break the control.

## Mind Reading

Mental (Information) Active
This discipline allows the psychic to read the minds of others. Once this power has been successfully activated against a target an attempt can be made once per round to the exclusion of all other activity. To be successful the psychic must overcome the target's WIL with her effective pPOW. Each successful attempt gleans information from the target's mind. The depth of the mind reading is determined by the level of success.

| Success <br> Critical $^{3}$ | Result <br> The subconscious and all memories are <br> completely available. |
| :--- | :--- |
| Critical $^{2}$ | Most of the subconscious a memories <br> are available. All strong memories, <br> normal memories no more than 10 |
|  | old and faint memories less than a year <br> old. |
| Critical |  |
|  | Superficial access to the subconscious <br> mind. Strong memories no more than ten <br> years old and normal memories less than <br> a year old are available. <br> Strong memories less than a year old or <br> normal memories of the past day as well <br> as current thoughts are available. <br> Can only see what is in the forefront of <br> the target's mind. |
| Normal |  |

## Mirage

Physical (Create)
This discipline projects a visual presence that is perceived normally by others. Consequently this power is unaffected by Shield though its effectiveness may be reduced by Damper. To achieve full opacity requires effective pPOW 10 at the place where the mirage is created. To achieve fully controlled, smooth motion requires effective pPOW 10. To achieve fully detailed verisimilitude requires effective pPOW 10. Thus effective pPOW 30 is required to achieve a fully believable visual presence. Additional effective pPOW can be used to fool additional senses. Effective pPOW 10 for fully believable audio, effective pPOW dedicated to volume is limit to sound intensity, effective pPOW 10 for fully believable smell, effective pPOW 10 for fully believable texture and effective pPOW 10 for STR (no more effective pPOW can be assigned to full solidity than to texture). Note, additional senses can only be utilized in order of sound, smell and texture. Texture includes thermal sense (e.g., hot or cold).

## Pocket Space

Physical (Space)
Passive
This discipline allows the psychic to create an extradimensional space that moves with her allowing for the nearly undetectable transportation of objects.

## Pyrokinesis

| Diff | Material |
| :---: | :--- |
| 0 | tinder; paper; dry leaves |
| 1 | grass; hair; kerosene |
| 3 | light, dry wood; oil |
| 5 | dry wood; light cloth |
| 8 | dense, dry wood; coal; cloth |
| 10 | dry hardwood; canvas; dry peat |
| 13 | green softwood; wet cloth; raw coal |
| 16 | green wood; dry hides; soaked cloth |
| 20 | greed hardwood; hides; wet peat or wood |
| 25 | treated wood; fresh hides |
| 35 | soaked hides |
| 50 | wet treated lumber |
| 75 | most soft or light rocks |
| 90 | most hard or dense rocks |

0 tinder; paper; dry leaves
grass; hair; kerosene
light, dry wood; oil
dry wood; light cloth
dense, dry wood; coal; cloth
dry hardwood; canvas; dry peat
green softwood; wet cloth; raw coal green wood; dry hides; soaked cloth greed hardwood; hides; wet peat or wood treated wood; fresh hides
soaked hides
wet treated lumber
most soft or light rocks
most hard or dense rocks


The space so created is capable of holding a number of ounces equal to exerted pPOW. To retrieve an item from the pocket space takes one action.

## Psychokinesis

Projection (Force)
Active
This discipline allows the psychic to project a mental hand which can be used to move objects and make remote manipulations with a strength equal to effective pPOW, a dexterity equal to her WIT plus skill level, and any appropriate skill with an effective score equal to the lesser of that of the skill itself and this discipline. This could be used, for example, to wield a sword remotely or to open a door from a distance.

For example, a psychic exerting an effective pPOW 6 at twenty feet could wield a shortsword at that distance doing 1d8 chop damage and having Parry 2. She could also try to wrestle a weapon from an opponent using Grapple.

## Psychometry

## Mental (Information)

Active
This discipline allows the psychic to pick up psychic resonances form the past. Such resonances are found in objects and areas and generally allow the psychic to see things that have happened in the past. The closer the psychic is to the object with the resonance and the more powerful the resonance the better a picture the psychic gets.

A psychic resonance is normally created by magic or emotional events. In the case of magic the strength is equal to the spell level. With emotional events it is up to the referee to assign an appropriate number. Most events hover below a score of 1 , but something like a murder might be around a 20.

A psychic resonance loses strength over time as indicated on the table. It amounts roughtly to one point of strength after a minute with the time doubling for each additional point. After an hour a psychic resonance loses 7 points of strength. A clever psychic who knows the resonance fade can back figure the original potency from the perceived resonance strength.


## Resonance Vividness

pPOW Detail of Impression
1-3 Vague: predominate type of emotion (love, hate, despair); type or form of magic (black sorcery, animal wizardry, thaumaturgic list).
4-6 Slight: non-specific information about cause of emotion (a death, sexual act, swearing of an oath) and source or cause of emotion as appropriate for the object (race of person); circumstances of magic (race of caster and/or target as appropriate for the object); rought idea of how long ago (a matter of minutes, hours, days, weeks, years or centuries)
7-12 Basic: visual images of source or cause of emotion or magic (caster's face); visual images of event showing scope and general purpose, but not reveal of detail (spell casting, act of murder); basic idea of when (morning, midday, night, etc.) and how long ago (the points lost to resonance fade).
13-18 Good: visual images of event including significant objects or creatures involved with it; good idea of when (hour of day) and how long ago (precision is three steps better on the resonance fade).
19-30 Detailed: visual images of environment of event, details images of principles involved; excellent idea of how long ago (precision is six steps better on the resonance fade).
31-42 Superlative: detailed images of environment; exacting knowledge of how long ago (precision is ten steps better on the resonance fade).
43+ Perfect: complete image of event as if psychic were there. Psychic can move about and get different details and look closely at different aspects of anything in the environment of the event. Time knowledge is perfect.


## Pyrokinesis

Projection (Force)
Active
This discipline allows the psychic to cause inanimate objects to spontaneously combust. The larger and less combustible the target the greater the effective pPOW required, the chance of ignition per round (rolled at the end of the round) is equal to effective pPOW, less the target's weight in pounds, against the material's resistance. The resulting fire takes 6 SR, less the level of success, to reach full intensity for the object's natural flame. On a miss the object fails to combust but emits a thin whisp of smoke or steam (as appropriately for the situation) for effective pPOW strike ranks.

## Second Sight

## Mental (Information)

This discipline allows the psychic to see spirits and other invisible creatures or objects. The maximum perception score is equal to half pPOW. For example, with pPOW 24 and Scan 15 any scan rolls would be made with score 12 .

## Shadow

## Physical (Create)

This discipline allows the psychic to create a blanket of darkness so thick as to have a penalty to any vision based skill equal to effective pPOW. At effective pPOW 40 no vision is normally possible. Although normally the psychic is at the center of


the shadow she can project its origin to anywhere she desires and it will originate from that point as if the psychic where there exerting her effective pPOW at the location.

For example, a psychic who exerted 25 pPOW has effective pPOW 3 at fifty feet. She could exert a darkness there that gave a penalty of 1 to vision based skills directed at targets in the targeted hex and hexes adjacent to it. At the center of the cloud would be a penalty 3 locus of shadow.

## Shapeshift [Form]

## Physical (Body)

Passive
This discipline allows the psychic to change shape into the indicated form with each form being a separate skill. To make the change requires exerted pPOW for the difference between the psychic's natural shape and the targeted shape. The basic requirement is set by the sizes. For example, a human psychic attempting to shapeshift into an elf requires 1 pPOW for size.

Each major difference increases the required pPOW by 5-for example, gaining or losing wings; extra or fewer appendages; skin versus fur versus feathers versus scales versus chitin; hands versus paws versus hooves. An orc psychic shapeshifting into a lizardman has to muster 1 pPOW for size and 5 pPOW for scales. A pixie psychic shapeshifting into a centaur has to muster 18 pPOW for size, 5 pPOW for losing wings, 5 pPOW for gaining an

| Shapeshift Belongings |  |  |  |
| :---: | :---: | :---: | :---: |
| pPOW | max Weight | pPOW | max Weight |
| 0 | 1 ounce | 11 | 3 pounds |
| 1 | $11 / 2$ ounces | 12 | 4 pounds |
| 2 | 2 ounces | 13 | 6 pounds |
| 3 | 3 ounces | 14 | 8 pounds |
| 4 | $1 / 4$ pound | 15 | 11 pounds |
| 5 | $3 / 8$ pound | 16 | 16 pounds |
| 6 | $1 / 2$ pound | 17 | 22 pounds |
| 7 | $3 / 4$ pound | 18 | 32 pounds |
| 8 | 1 pound | 19 | 44 pounds |
| 9 | $11 / 2$ pounds | 20 | 63 pounds |
| 10 | 2 pounds | 21 | 88 pounds |
| worn require 8 fewer $p P O W$ | +1 | $\times \sqrt{2}$ |  |

## 

extra pair of legs, 5 pPOW for the non-humanoid shape and 5 pPOW for feet to hooves for a total of 38 pPOW.

Finally, if clothing or possessions are to be shifted with the psychic there is an additional pPOW requirement for each such item. Things that are worn are easier to shift than things that are carried. Magical items add their SL to the pPOW requirement - shapeshifting psychics often avoid such. Anything not shifted may cause constriction when shifting to a larger size and can be potentially harmful or even fatal. While shifted items cannot normally be used by the psychic. If the psychic so specifies an item, such as armor, can be shifted in a manner consistent with the form and still externalized and thus beneficial. However, being part of the shapeshift it cannot be removed or relinquished.

Once the change has been completed the psychic only needs to expend the FP every skill level minutes as it is a passive discipline. For example, a pixie with POW 15 and Shapeshift Centaur 24 can just muster the necessary pPOW necessary for the change, though doing so costs 4 FP. After that, however, she will only need to exert 4 FP every 8 minutes.

While shapeshifted the psychic has the size of the target shape with an appropriate adjustment to STR (use the HP multiplier for size). Only mundane abilities of the target shape are obtained, not magical ones. Thus a psychic shapeshifting into a dragon can fly, but not breathe fire.

Although a psychic can shapeshift into nearly any form she can only do ones that are living creatures: she cannot shapeshift into a tree or a rock. And if the nature of the creature is simply different then, after accounting for all the external differences, the required pPOW is further increased by 5. A good example of this is an insect. A psychic attempting to shapeshift into a praying mantis must exert pPOW for the size difference plus 5 pPOW for skin to chitin, 5 pPOW for hands to claws, 5 pPOW for extra appendages 5 pPOW for a different shape (more than just the appendages) and and additional 5 pPOW for being an insect.

Shield

## Projection (Meta)

Passive
This discipline shields the psychic from other psychic disciplines which affect the mind. The pPOW exerted directly reduces the effective pPOW of any psychic Mental discipline. Another psychic who comes up against the shield will recognize it for what it is and can tell whether the exerted pPOW is less or greater than her effective pPOW.

A psychic with this discipline at skill rank 3 can tune it to shield against a specific psychic discipline or against a specific psychic which doubles both the maximum pPOW and the exerted pPOW. However, doing so requires active use of the discipline and the two cannot be combined.

## Sleep

## Mental (Domination)

## Active, Broadcast

This discipline causes those affected to sleep. It can be directed against a single target or broadcast against everyone within range. Any target affected by at least 1 pPOW feels the effect and incurs a penalty of 1 to all actions. If effective pPOW is at least $1 / 3$ the target's WIL then the penalty is increased to 3. If effective pPOW reaches the target's WIL he becomes so drowsy as to suffer a penalty of 6. If effective pPOW reaches three times WIL the target falls asleep and will not normally awaken unless effective pPOW drops below WIL, though forceful or vigorous attempts to awaken a sleeping target will be successful if effective pPOW is less than thrice WIL.

## Slow Time

## Physical (Space)

## Active

This active psychic discipline allows the psychic to distort time such that it flows more slowly for those near her. In particular, actions are delayed a number of strike ranks dependent on effective pPOW. In any given SR evaluate the delay based on the effective pPOW in that SR, the SR penalty being equal to one tenth effective pPOW. The SR penalty is rounded

down, but any remainder is an action penalty if the character attempts the action without delaying an additional SR. An effective pPOW 1 causes a penalty of 1 unless the character delays the action by one strike rank and effective pPOW 10 forces a one strike rank delay though no additional penalties.

For example, if a victim would normally act in SR 6, but in SR 6 is delayed to SR 2 then the action does not occur in SR 6. This is evaluated again in SR 5 (assuming the effective pPOW has changed), SR 4 and so on. If in SR 4 the effective pPOW dictates a delay of 2 SR, which given a base SR of 6 would indicate the action occurs in SR 4, then the action takes place. This could happen if, for example, the psychic move away from the victim. Conversely, if the psychic moved closer to the victim then the delay could increase. If the action is delayed such that in SR 0 it still does not occur then it does not occur in that round. Per the normal rules an action must be completed in a single round to take place so the action would have to be restarted in the new round.

A common tactic for victims is to move away from the psychic. They can do so, but the movement is delayed by the appropriate number of strike ranks. For example, if the victim is suffering a 3 SR delay and declares movement away from the psychic in SR 5 then in SR 2 (assuming the delay has not lengthened by then) he can start to move. Further, movement actions can only occur in strike ranks ten through one so a movement delayed to SR 0 does not occur.

## Sniffer

## Projection (Perception)

Passive
This discipline allows the psychic to detect and possibly identify the use of other psychic powers. The pPOW of this discipline is increased by the pPOW of any power that might be detected. If the effective pPOW is zero then only the presence of a psychic power is detected. Greater effective pPOW can be used to determine direction, distance and discipline as desired by the psychic. For example, if the psychic's pPOW is 1 where the psychic power

being used is and that power has pPOW 8 then pPOW 9 is used to determine the information that can be gathered. In any case the psychic must specify a priority of information to be found before activating this discipline. To change the priorities requires that the power be re-activated. A combined effective pPOW of 25 will obtain all information.

For example, if the psychic designates that all available pPOW will be divided equally betwen the three categories with a preference for distance followed by direction, has POW 14, Sniffer 15, Channel 8 and a meditative focus on detecting activity then a psychic discipline of pPOW 4 exerted 100' away lies within the PRE 2 range band of nineteen to forty one hexes. With Sniffer pPOW 4 (PRE 2, doubled for Channel rank 1) added to psychic activity of pPOW 4 the combined pPOW 8 gives 3 for distance, three for direction and 2 for discipline. The psychic ascertains the direction of the discipline effect to a sixteen-point direction. The distance calls for the roll of 1 d 3 , which in this case is 3 yielding $2-3+3=2$, so the range is for PRE 2 through PRE 4, or 20 ' to a $140^{\prime}$.
Direction: one pPOW gives a general direction (north, south, east or west), two pPOW gives eight-point direction (north-east, etc.), three pPOW gives sixteen-point direction (north northeast, etc.), four pPOW gives 32-point direction, and five pPOW gives direction to within $5^{\circ}$. Each additional pPOW reduces the arc by $1^{\circ}$.
Distance: represented by a range of hexes found by hex distances for one or more PRE scores for the psychic's POW. One pPOW gives a general distance-the psychic knows only the distance as a range band for a given PRE score equal to actual PRE $\pm 2$ (randomly selected) and having a range of $\pm 2$. For two pPOW the range band is

| Sniffer Distance |  |  |
| :---: | :--- | :--- |
| $p P O W$ | $\min P R E$ | $\max P R E$ |
| 1 | $\mathrm{PRE}-5+1 \mathrm{~d} 5$ | $\operatorname{minPRE}+4$ |
| 2 | $\mathrm{PRE}-4+1 \mathrm{~d} 4$ | $\operatorname{minPRE}+3$ |
| 3 | $\mathrm{PRE}-3+1 \mathrm{~d} 3$ | $\operatorname{minPRE}+2$ |
| 4 | $\mathrm{PRE}-2+1 \mathrm{~d} 2$ | $\operatorname{minPRE}+1$ |
| 5 | PRE | $\operatorname{PRE}$ |

four PRE wide and randomly selected to include actual PRE in the range. For three pPOW this becomes a range band of PRE $\pm 1$ centered on a randomly selected PRE $\pm 1$. For four pPOW the range band is two PRE wide and randomly selected to include actual PRE in the range. For five pPOW use the range for PRE. For ten pPOW use the range in feet.
Discipline: one pPOW reveals the general type (mental, physical, projection). Two pPOW reveals the specific type (domination, information, perception, space, etc.). Five pPOW reveals the discipline.

## Telecoercion

## Mental (Influence)

This discipline allows the psychic to manipulate the thoughts of others by matching her effective pPOW against the WIL of the target. The level of success determines the amount of control obtained. Control endures for as long as the target is subject to at least an effective pPOW 1. The exercise of this psychic discipline is felt by the target as brushes against the mind, thus a miss can alert the target.

The psychic can try to improve her level of success through repeated attempts, each attempt taking one action with no more than one attempt per round. If the new attempt is at a higher level of success then it replaces the previous level of success. Perception of repeated attempts becomes a part of the target's memory - though the target's memory may be altered as seen below. Any failure or fumble immediately terminates the connection.

This psychic discipline does not allow the psychic to read the mind or communicate telepathically with the target-it merely allows the psychic's verbal suggestions to over ride the target's reality through suggestion or altered memory.

Suggestions can be immediate or delayed. The target can resist obeying a suggestion by matching WIL against five times the level of success. If he loses he will perform the suggested act to the best of his ability. Altered memories are more believable the deeper they are implanted-the target's Memory skill is penalized by 6 per level of success.

The psychic can only alter memories at a level appropriate to the level of success obtained. For example, with a normal success the immediate awareness of the target can be altered, but once pPOW are no longer being applied the target would return to normal after one action.

## Success Result

Critical ${ }^{3}$ Deepest trance, the target is oblivious to her surroundings though still able to hear the voice of the psychic. The maximum time for altering memories or planting suggestions for the future is nine and a half years.
Critical ${ }^{2}$ Deeper trance, the target is unaware of her surroundings and only peripherally aware of physical contact (rough handling is required to gain attention). The maximum time for altering memories or planting suggestions for the future is five weeks.
Critical Deep trance, the target is unaware of her surroundings though physical contact is still sensed. The maximum time for altering memories or planting suggestions for the future is eight hours.
Special Normal trance, the target is only peripherally aware of her surroundings (passive perceptions rolls only for environment). The maximum time for altering memories or planting suggestions for the future is five minutes.
Normal Shallow trance, the target has normal awareness of her surroundings. The maximum time for altering memories or planting suggestions for the future is one action which effectively limits telecoercion to the here and now.

## Telekinesis

Projection (Force) Active
This discipline allows the psychic to move objects with her mind. The psychic must exert effective pPOW equal to the weight of the object in pounds.

4@(O)@L@S@@@L(D)
This gives a movement of one. Any excess effective pPOW give a higher movement as found on the following table. If the object weighs less than half a pound the excess effective pPOW is increased by one.

## Telelocate

Projection (Perception)
Active
This discipline allows the psychic to precisely locate the target. This is primarily useful in locating unseen targets to use a different psychic discipline on them. Each round this power is active and the desired target is within range there is a chance that the target is located found by comparing effective pPOW, plus target's PRE (if any) at the psychic's location, to the difficulty. Normally the difficulty is one, but in some cases it will be more difficult. For example, the hobgoblin power of not being observed causes the hobgoblin's POW to be the difficulty. If the target is using Dampen and effective pPOW is reduced below 1 then the psychic will simply not have any perception of her. On the other hand if effective pPOW after Dampen is at least 1 and the roll is missed the psychic will be aware that Dampen is at play. Similarly, Shield reduces the efficacy of this discipline, but the psychic will always be aware that Shield is being used.

## Telepathy

Mental (Information) Broadcast
This discipline allows the psychic to send verbalized thoughts to others if effective pPOW is at least 1 . Emotions can be transmitted with an effective pPOW of at least 5 . Images can be transmitted with an effective pPOW of at least 10 .

Once a link to the target has been established then it will remain with no further effort beyond exerting the pPOW required to maintain it. In this mode of telepathy both the psychic and the target can send verbalized thoughts. If the target is also a telepath then the effective pPOW is increased by the target's POW. If both are attempting to make contact then the POW and exerted pPOW of each psychic is totalled and combined to find the effec-

## Telekinetic Movement

| pPOW | Mv | Speed | pPOW | Mv | Speed |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 3 | $31 / 2 \mathrm{mph}$ | 21 | 53 | 60 mph |
| 2 | 5 | $51 / 2 \mathrm{mph}$ | 22 | 55 | 63 mph |
| 3 | 8 | 9 mph | 23 | 58 | 66 mph |
| 4 | 10 | 11 mph | 24 | 60 | 68 mph |
| 5 | 13 | 15 mph | 25 | 63 | 72 mph |
| 6 | 15 | 17 mph | 26 | 65 | 74 mph |
| 7 | 18 | 20 mph | 27 | 68 | 77 mph |
| 8 | 20 | 23 mph | 28 | 70 | 80 mph |
| 9 | 23 | 26 mph | 29 | 73 | 83 mph |
| 10 | 25 | 28 mph | 30 | 75 | 85 mph |
| 11 | 28 | 32 mph | 31 | 78 | 89 mph |
| 12 | 30 | 34 mph | 32 | 80 | 91 mph |
| 13 | 33 | 38 mph | 33 | 83 | 94 mph |
| 14 | 35 | 40 mph | 34 | 85 | 97 mph |
| 15 | 38 | 43 mph | 35 | 88 | 100 mph |
| 16 | 40 | 45 mph | 36 | 90 | 102 mph |
| 17 | 43 | 49 mph | 37 | 93 | 106 mph |
| 18 | 45 | 51 mph | 38 | 95 | 108 mph |
| 19 | 48 | 55 mph | 39 | 98 | 111 mph |
| 20 | 50 | 57 mph | 40 | 100 | 114 mph |

tively exerted pPOW. For example, if one psychic with POW 10 exerts pPOW 20 and the other with POW 12 exerting pPOW 25 then the combined pPOW 67 gives a maximum range of 897 hexes (about 4,500 feet)-substantially greater than the sum of their individual maximum ranges of 79 hexes and 124 hexes, respectively. Even if the second psychic were not also trying to establish contact the effectively exerted pPOW would be 20 $+12=32 \mathrm{pPOW}$ or a maximum range of 204 hexes (1,020 feet).

Alternatively the psychic can broadcast to everyone within range. For non-telepaths simply determine range as normal, but telepaths add their POW to the psychic's exerted pPOW and listening psychics added their own exerted pPOW in addition, just as if it were being sent directly to them.
Everyone within their respective ranges will receive the thoughts sent by the psychic. If emotions or images are being sent they will only be received by those for which the effective pPOW is sufficient.


Teleportation
Physical (Space)
Active
This discipline allows the psychic to move things from one place to another without traversing the space in between. The first thing that the telepath must do is mentally "locate" the target of the teleportation. This is automatic if the destination is visible, otherwise she must use Telelocate. Once the destination has been acquired the psychic designates who or what is to be teleported. She can only teleport one object or person at a time, though immediate possessions of a creature are transported with the creature. Again, visible targets can be acquired with the Target skill, otherwise Telelocate must be used.

Once both destination and target have been acquired the psychic attempts to control this discipline and exerts the requisite pPOW so that she can reach the more distant of the target and the destination with sufficient pPOW to accomodate the target's weight.

Teleporting an unaware or unwilling target, or an object in the possession of such, increases the difficulty of controlling the discipline by the target's WIL and the required pPOW is increased by the target's POW.

At the end of the strike rank in which the teleportation action occurs the target object disappears. At the beginning of the next strike rank the target appears at the destination.

Note that the destination must be able to accomodate the target or the teleport will automatically fail. For example, the psychic cannot teleport someone into solid rock, but she can teleport them underwater. Dealing with issues such as pressure changes and relative momentum is up to the referee, but it is much simpler if they are simply ignored.

## Trigger Emotion

## Mental (Domination) Active

Triggers an emotional response in the target to an extent determined by the level of success in effective pPOW / WIL. A miss indicates the target feels, but is not dominated by the emotion. Success indicates

| Teleportation Weight |  |  |  |
| :---: | :---: | :---: | ---: |
| pPOW | Weight | $p P O W$ | Weight |
| 1 | 1 ounce | 19 | 16,000 pounds |
| 2 | 2 ounces | 20 | 32,000 pounds |
| 3 | 4 ounces | 21 | 63,000 pounds |
| 4 | 8 ounces | 22 | 125,000 pounds |
| 5 | 1 pounds | 23 | 250,000 pounds |
| 6 | 2 pound | 24 | 500,000 pounds |
| 7 | 4 pounds | 25 | 500 tons |
| 8 | 8 pounds | 26 | 1,000 tons |
| 9 | 16 pounds | 27 | 2,000 tons |
| 10 | 32 pounds | 28 | 4,000 tons |
| 11 | 63 pounds | 29 | 8,000 tons |
| 12 | 125 pounds | 30 | 16,000 tons |
| 13 | 250 pounds | 31 | 32,000 tons |
| 14 | 500 pounds | 32 | 63,000 tons |
| 15 | 1,000 pounds | 33 | 125,000 tons |
| 16 | 2,000 pounds | 34 | 250,000 tons |
| 17 | 4,000 pounds | 35 | 500,000 tons |
| 18 | 8,000 pounds | 36 | $1,000,000$ tons |

the target is dominated by the most likely (as judged by referee) emotion under the circumstances. A special success allows the psychic to choose the emotion triggered from those the referee considers likely. Critical successes cause an increase in the emotional response.

A character who is dominated by emotion has a generalized penalty of 5 , increased by 5 for each level of critical success in the resistance roll. A character who is at peace suffers a penalty due to general indolence and apathy while a fearful character suffers a penalty due to agitation, and so on. The penalty may be adjusted on a case-by-case basis by the referee. For example, a character filled with peace is unlikely to have much penalty when meditating.

Typical emotions are: elation, fear, peace, rage and relief. A target who is timid and being threatened would most likely respond with fear, though rage is another possibility. Relief and peace are singularly unlikely with elation being possible though rather unlikely. The referee may arbitrarily alter the strength of the emotional response in correlation with its likelihood. If a character at-

## Tim Doty


tempts to not act in accord with the emotion then he must succeed in a specific resistance roll (which does not otherwise alter his general emotional state) with a base difficulty of five, doubled to ten if the intended action is in direct contradiction as opposed to simply not being aligned with.

This has limited utility in a fight as the most that can usually be hoped for is a reduced penalty to fighting skills from rage.

Category/Weapon
Axe, $1 H$

| Battle Axe | M | $\times 1.0$ Chop | - | $\times 0.3$ | $2 / 10$ | 6 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Hachet | C | $\times 0.8$ Chop | -2 | $\times 0.2$ | $2 / 7$ | 3 | 1 |
| Pick | C | $\times 0.6$ Impale | -2 | $\times 0.2$ | $2 / 6$ | 2 | $3 / 4$ |
| Small Axe | S | $\times 0.8$ Chop | - | $\times 0.2$ | $2 / 7$ | 3 | 1 |
| Small Pick | S | $\times 0.8$ Impale | -4 | $\times 0.2$ | $2 / 7$ | 3 | 1 |
| Great Axe | L | $\times 1.3$ Chop | - | $\times 0.4$ | $2 / 15$ | 14 | $4 \frac{1}{2}$ |
| War Pick | L | $\times 1.2$ Impale | - | $\times 0.4$ | $2 / 14$ | 13 | 4 |

Axe, $2 H$
Battle Axe
Great Axe
War Pick
Wood Axe
Work Pick
Chain, 1 H (2H)

| Arlera | S | $\times 1.5$ Grapple | - | - | $1 / 3$ | 7 | $11 / 4$ |
| :--- | :---: | :--- | :--- | :--- | :--- | :---: | :---: |
| Bolas | M | $\times 2.0$ Grapple | - | - | $1 / 5$ | 10 | 3 |
| Chain, 2-foot | S | $\times 1.0$ Grapple | - | $(\times 0.8)$ | $8 / 8$ | $9(6)$ | 3 |
| Chain, 4-foot | M | $\times 1.5$ Grapple | - | $(\times 0.8)$ | $8 / 15$ | $12(8)$ | 6 |
| $\quad$ hurl | S | $\times 1.0$ Stun |  |  |  |  |  |
| Chain, 6-foot | L | $\times 1.8$ Grapple | - | $(\times 0.8)$ | $8 / 23$ | $15(10)$ | 9 |
| $\quad$ hurl | M | $\times 1.5$ Stun |  |  |  |  |  |
| Chain, 8-foot | P | $\times 2.0$ Grapple | - | $(\times 0.8)$ | $8 / 30$ | $18(12)$ | 12 |
| $\quad$ hurl | L | $\times 2.0$ Stun |  |  |  |  |  |
| Manriki | M | $\times 1.3$ Grapple | - | $(\times 0.8)$ | $5 / 8$ | $9(6)$ | 3 |
| $\quad$ hurl | L | $\times 1.0$ Stun |  |  |  |  |  |
| Manriki-Gusari <br> hurl | L | $\times 1.8$ Grapple | - | $(\times 0.8)$ | $5 / 16$ | $12(8)$ | 6 |
| Surujin | P | $\times 2.0$ Stun |  |  |  |  |  |
| $\quad$ hurl | P | $\times 2.0$ Grapple | - | - | $1 / 8$ | 11 | 4 |

Club, $1 H$

| Baton | S | $\times 0.6$ Crush | - | $\times 0.2$ | $1 / 5$ | 3 | 1 |
| :--- | :---: | :--- | :---: | :---: | :---: | :---: | :---: |
| Blackjack | S | $\times 1.0$ Stun | - | - | $1 / 5$ | 3 | 1 |
| Boomerang | S | $\times 0.6$ Crush | - | $\times 0.2$ | $1 / 5$ | 3 | 1 |
| Club | M | $\times 1.3$ Crush | -2 | $\times 0.4$ | $1 / 11$ | 16 | 5 |
| Large Club | L | $\times 2.4$ Crush | -2 | $\times 0.6$ | $1 / 16$ | 36 | 10 |
| Large Mace | L | $\times 1.7$ Crush | - | $\times 0.5$ | $2 / 16$ | 17 | $51 / 2$ |
| Mace | M | $\times 1.0$ Crush | - | $\times 0.3$ | $2 / 10$ | 6 | 2 |
| Riding Crop | S | $\times 0.6$ Stun | - | $\times 0.2$ | $1 / 5$ | 2 | $1 / 2$ |
| Sap | C | $\times 0.7$ Stun | - | - | $-/-$ | 2 | $1 / 2$ |
| Small Club | M | $\times 1.0$ Crush | -2 | $\times 0.3$ | $1 / 9$ | 9 | 3 |
| Throwing Stick | S | $\times 0.6$ Crush | - | $\times 0.2$ | $1 / 5$ | 3 | 1 |
| Throwing Club | M | $\times 1.0$ Crush | - | $\times 0.3$ | $1 / 9$ | 9 | 3 |

## Weapon List

Category/Weapon
Club, 2H

| Club | M | $\times 1.6$ Crush | -2 | $\times 0.7$ | $1 / 11$ | 10 | 5 |
| :--- | :---: | :--- | :---: | :--- | :--- | :--- | :---: |
| Large Club | L | $\times 3.5$ Crush | -2 | $\times 1.0$ | $1 / 16$ | 23 | 10 |
| Huge Club | P | $\times 6.0$ Crush | -2 | $\times 1.6$ | $1 / 25$ | 73 | 25 |
| Large Mace | L | $\times 2.0$ Crush | - | $\times 0.8$ | $2 / 16$ | 11 | $51 / 2$ |
| Mace | M | $\times 1.2$ Crush | - | $\times 0.5$ | $2 / 10$ | 4 | 2 |
| Small Club | M | $\times 1.3$ Crush | -2 | $\times 0.5$ | $1 / 9$ | 6 | 3 |
| Staff | L | $\times 1.0$ Crush | - | $\times 0.5$ | $1 / 8$ | 5 | $21 / 2$ |

Fencing, $1 H$
Rapier
slash
Small Sword
slash

Katana slash
Baton
Fencing, 2H

| Bastard Sword $\dagger$ | M | $\times 1.0$ Impale | - | $\times 1.0$ | $4 / 20$ | 6 | 4 |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- | :---: |
| Broad Sword $\dagger$ | L | $\times 1.2$ Impale | - | $\times 1.1$ | $4 / 22$ | 8 | 5 |
| Great Sword | L | $\times 1.5$ Impale | - | $\times 1.3$ | $4 / 26$ | 11 | 7 |
| Katana | M | $\times 0.8$ Impale | - | $\times 0.8$ | $4 / 16$ | 4 | $2 \frac{1 / 2}{2}$ |
| Quarterstaff | L | $\times 1.0$ Crush | - | $\times 0.8$ | $1 / 8$ | 4 | $2 \frac{1}{2}$ |

Flail, 1 H

| Ball \& Chain | M | $\times 1.8$ Stun | - | - | $1 / 8$ | 8 | $2 \frac{1}{2}$ |
| :--- | :---: | :--- | :---: | :---: | :--- | :---: | :---: |
| Chain, 4-foot | M | $\times 2.0$ Stun | - | - | $8 / 15$ | 12 | 6 |
| Grain Flail | M | $\times 1.0$ Stun | - | $\times 0.3$ | $1 / 7$ | 6 | 2 |
| Military Flail | L | $\times 2.4$ Stun | -2 | $\times 0.4$ | $2 / 14$ | 13 | 4 |
| Nunchaku | S | $\times 1.0$ Stun | - | - | $1 / 5$ | 3 | 1 |
| War Flail | M | $\times 2.0$ Stun | - | $\times 0.3$ | $2 / 12$ | 9 | 3 |

Flail, 2 H

| Grain Flail | M | $\times 1.2$ Stun | - | $\times 0.5$ | $1 / 7$ | 4 | 2 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Military Flail | L | $\times 3.0$ Stun | - | $\times 0.7$ | $2 / 14$ | 8 | 4 |
| Pole Flail | P | $\times 4.5$ Stun | - | $\times 0.9$ | $1 / 13$ | 10 | 7 |
| War Flail | M | $\times 2.4$ Stun | - | $\times 0.6$ | $2 / 12$ | 6 | 3 |

Hammer, 1 H

| Battle Hammer | M | $\times 1.0$ Crush | - | $\times 0.3$ | $2 / 10$ | 6 | 2 |
| :--- | :--- | :--- | :---: | :--- | :--- | :---: | :---: |
| Blacksmith's Hammer | C | $\times 1.2$ Crush | -5 | $\times 0.3$ | $2 / 8$ | 8 | $2 \frac{1}{2}$ |
| Carpenter's Hammer | C | $\times 0.5$ Crush | -2 | $\times 0.2$ | $2 / 5$ | 3 | 1 |
| Maul | L | $\times 2.3$ Crush | -5 | $\times 0.5$ | $2 / 15$ | 33 | 9 |
| War Hammer | L | $\times 1.4$ Crush | - | $\times 0.4$ | $2 / 13$ | 17 | 5 |
| $\quad$reversed |  | $\times 1.4$ Impale |  |  |  |  |  |

Hammer, 2 H
$\begin{array}{llllllll}\text { Battle Hammer } & \text { M } & \times 1.2 \text { Crush } & - & \times 0.5 & 2 / 10 & 3 & 2\end{array}$

# Weapon List 

| Category/Weapon | Reach | Damage | Skill | Parry | AP/HP | STR** | Weight |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maul | L | $\times 2.9$ Crush | -5 | $\times 0.9$ | 2/15 | 20 | 9 |
| War Hammer reversed | L | $\begin{aligned} & \times 1.8 \text { Crush } \\ & \times 1.8 \text { Impale } \end{aligned}$ | - | $\times 0.7$ | 2/13 | 10 | 5 |
| Knife |  |  |  |  |  |  |  |
| Belt Knife thrust | C | $\begin{aligned} & \times 0.5 \text { Cut } \\ & \times 0.4 \text { Impale } \end{aligned}$ | - | - | 3/6 | 2 | 1/2 |
| Dagger <br> thrust | C | $\begin{aligned} & \times 0.6 \mathrm{Cut} \\ & \times 0.5 \text { Impale } \end{aligned}$ | - | - | 4/10 | 3 | 1 |
| Jambiya thrust | C | $\begin{aligned} & \times 0.8 \text { Cut } \\ & \times 0.5 \text { Impale } \end{aligned}$ | - | - | 4/10 | 3 | 1 |
| Kukri | C | $\times 0.6$ Chop | - | - | 4/10 | 3 | 1 |
| Main Gauche slash | C | $\begin{aligned} & \times 0.5 \text { Impale } \\ & \times 0.8 \mathrm{Cut} \end{aligned}$ | - | $\times 0.2$ | 4/9 | 3 | $3 / 4$ |
| Stiletto | C | $\times 0.3$ Impale | - | - | 4/5 | 1 | 1/4 |
| Sword-breaker | C | $\times 0.4$ Chop | - | $\times 0.2$ | 4/12 | 3 | 1 |
| Triple Dagger | C | $\times 0.5$ Impale | - | $\times 0.2$ | 4/8 | 3 | 1 |
| Lance |  |  |  |  |  |  |  |
| Lance | X | $\times 1.6$ Impale* | - | - | 2/22 | 14 | 10 |
| Long Spear | P | $\times 1.0$ Impale* | - | - | 1/11 | 6 | $41 / 2$ |
| Jousting Lance | X | $\times 0.8$ Crush* | - | - | 0/13 | 14 | 10 |

Lasso
Lasso
Net
Small Net
Polearm
Bec-de-Corbin
thrusting
$\begin{array}{lllllll}\text { P } & \times 1.6 \text { Chop } & - & \times 1.0 & 2 / 14 & 5 & 4\end{array}$ backswing
Bill
Halberd
thrusting backswing
Polesword
thrusting
Spear, $1 H$

| Pitchfork | L | $\times 0.5$ Impale | -5 | $\times 0.5$ | $1 / 11$ | 14 | $4 \frac{1}{2} 2$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| Long Spear | P | $\times 0.8$ Impale | - | $\times 0.4$ | $1 / 11$ | 14 | $41 / 2$ |
| Short Spear | L | $\times 0.6$ Impale | - | $\times 0.4$ | $1 / 9$ | 11 | $31 / 2$ |
| Trident | L | $\times 0.6$ Impale | - | $\times 0.5$ | $1 / 10$ | 13 | 4 |
| ar, $2 H$ |  |  |  |  |  |  |  |
| Long Spear | P | $\times 1.0$ Impale | - | $\times 1.1$ | $1 / 11$ | 7 | $4 \frac{1}{2} / 2$ |
| Pike | X | $\times 2.0$ Impale | - | $\times 1.4$ | $1 / 14$ | 13 | 8 |
| Quarterstaff | L | $\times 0.6$ Crush | - | $\times 0.8$ | $1 / 8$ | 4 | $2^{1 / 2}$ |


| Category/Weapon | Reach | Damage | Skill | Parry | $A P / H P$ | STR** | Weight |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Short Spear | L | $\times 0.8$ Impale | - | $\times 0.9$ | 1/9 | 5 | $31 / 2$ |
| Trident | L | $\times 0.8$ Impale | - | $\times 1.2$ | 1/10 | 6 | 4 |
| Staff |  |  |  |  |  |  |  |
| Quarterstaff | L | $\times 1.0$ Crush | - | $\times 0.8$ | 1/8 | 5 | $21 / 2$ |
| Sword, 1 H |  |  |  |  |  |  |  |
| Bastard Sword | L | $\times 1.2$ Chop | - | $\times 0.4$ | 4/20 | 13 | 4 |
| Broad Sword | L | $\times 1.3$ Chop | - | $\times 0.4$ | 4/22 | 16 | 5 |
| Cutlass | S | $\times 1.2 \mathrm{Cut}$ | - | $\times 0.3$ | 4/14 | 6 | 2 |
| Great Sword | L | $\times 1.6$ Chop | - | $\times 0.5$ | 4/26 | 24 | 7 |
| Katana | M | $\times 1.0$ Chop | - | $\times 0.3$ | 4/16 | 8 | 21/2 |
| Long Sword | M | $\times 1.0$ Chop | - | $\times 0.3$ | 4/17 | 9 | 3 |
| Rapier | M | $\times 1.0$ Chop | - | $\times 0.3$ | 4/17 | 9 | 3 |
| Scimitar | M | $\times 1.5 \mathrm{Cut}$ | - | $\times 0.3$ | 4/17 | 9 | 3 |
| Short Sword | S | $\times 0.8$ Chop | - | $\times 0.3$ | 4/14 | 6 | 2 |
| War Sword | L | $\times 1.0$ Chop | - | $\times 0.3$ | 4/17 | 9 | 3 |
| Baton | S | $\times 0.6$ Crush | - | $\times 0.2$ | 1/5 | 3 | 1 |
| Sword, 2H |  |  |  |  |  |  |  |
| Bastard Sword | L | $\times 1.5$ Chop | - | $\times 0.7$ | 4/20 | 8 | 4 |
| Broad Sword | L | $\times 1.6$ Chop | - | $\times 0.7$ | 4/22 | 10 | 5 |
| Great Sword | P | $\times 2.0$ Chop | - | $\times 0.9$ | 4/26 | 15 | 7 |
| Katana | M | $\times 1.2$ Chop | - | $\times 0.5$ | 4/16 | 5 | 21/2 |
| War Sword | L | $\times 1.3$ Chop | - | $\times 0.6$ | 4/17 | 6 | 3 |
| Quarterstaff | L | $\times 1.0$ Crush | - | $\times 0.5$ | 1/8 | 5 | $21 / 2$ |
| Unarmed ${ }^{2}$ |  |  |  |  |  |  |  |
| Brawl | C | $\times 0.5 \mathrm{Brawl}$ | - | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | n/a | $\mathrm{n} / \mathrm{a}$ |
| Cestus | C | $\times 0.5$ Crush | - | n/a | 2/7 | 3 | 1 |
| Fighting Claw | C | $\times 0.6$ Tear | -2 | n/a | 2/5 | 3 | 1 |
| Grapple | C | Grapple + STR | - | DEX $\div 3$ | n/a | n/a | n/a |
| Kick | S | $\times 0.6$ Stun | - | n/a | n/a | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ |
| Punch | C | $\times 0.5$ Stun | - | DEX $\div 3$ | n/a | n/a | n/a |
| Whip |  |  |  |  |  |  |  |
| Black Snake Whip entangle | M | $\times 0.2$ Tear $^{1}$ <br> $\times 0.4$ Grapple | - | $\times 0.5$ | 1/3 | 8 | 1 |
| Bull Whip entangle | $2^{0}$ | $\times 0.2$ Tear $^{1}$ <br> $\times 0.5$ Grapple | - | $\times 0.5$ | 1/5 | 10 | $11 / 4$ |
| Carter Whip entangle | $5^{0}$ | $\times 0.2$ Tear $^{1}$ <br> $\times 0.7$ Grapple | - | $\times 0.5$ | 1/12 | 16 | 3 |
| Snake Whip entangle | M | $\times 0.2$ Tear $^{1}$ <br> $\times 0.4$ Grapple | - | $\times 0.5$ | 1/3 | 7 | $3 / 4$ |

${ }^{\circ}$ Reach in hexes, used with a penalty at less than the listed reach
${ }^{1}$ Can be declared to strike for pain using $\times 0.6$ Stun
${ }^{2}$ This is a general heading. Each entry is a separate proficiency except cestus which uses Punch proficiency, and Body Slam which uses Brawl proficiency. An unarmed parry only works against unarmed attacks.

* Damage is based on the mount, not on the character wielding this weapon.
** A character can still use a weapon if they have greater than half the minimum STR, but with a penalty of 5 to attack and parry, and spending an extra FP every round.
$\dagger$ Many weapons having this name do not have a point suitable for thrusting and have half the adjSTR for Crush damage.
$\neq$ Armor counts half normal against this attack.

A character can still use a weapon if they have a greater than half the minimum STR, but with a penalty of 5 to attack and parry, and spending an extra FP every round.

Weapon
Axe, Thrown

| Hachet | $20^{\prime}$ | $41 / 2 \times$ | $71 / 2 \times$ | $\times 0.8$ Chop | -4 | 7 | 1 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Throwing Axe | $20^{\prime}$ | $41 / 2 \times$ | $7112 \times$ | $\times 0.8$ Chop | - | 7 | 1 |
| Battle Axe | $15^{\prime}$ | $3 \times$ | $41 / 2 \times$ | $\times 1.0$ Chop | -4 | 9 | 2 |
| Great Axe | $15^{\prime}$ | $2 \times$ | $3 \times$ | $\times 1.3$ Chop | -4 | 16 | $41 / 2$ |
| Hurl Bat | $20^{\prime}$ | $3 \times$ | $5 \times$ | $\times 1.0$ Chop | - | 9 | 2 |

## Archery

| Self Bow | $20^{\prime}$ | $7 \times$ | $50 \times$ | missile | - | 3 | 2 |
| :--- | ---: | ---: | ---: | :--- | :--- | :---: | :---: |
| Smallbow | $15^{\prime}$ | $5 \times$ | $40 \times$ | missile | - | 3 | $11 / 2$ |
| Shortbow | $20^{\prime}$ | $8 \times$ | $60 \times$ | missile | - | 3 | $11 / 2$ |
| Bow | $25^{\prime}$ | $10 \times$ | $70 \times$ | missile | - | 3 | 2 |
| Built Bow | $40^{\prime}$ | $15 \times$ | $90 \times$ | missile | - | 3 | $21 / 2$ |
| Composite Bow | $40^{\prime}$ | $15 \times$ | $90 \times$ | missile | - | 3 | 2 |
| Horse Bow | $30^{\prime}$ | $12 \times$ | $80 \times$ | missile | - | 3 | $11 / 2$ |
| Elf Bow | $50^{\prime}$ | $20 \times$ | $120 \times$ | missile | - | 3 | 2 |

## Blowpipe

| Blowpipe | $5 '$ | $2 \times \dagger$ | $5 \times \dagger$ | $\times 0.2 \dagger$ Impale* | - | $8 \dagger$ | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bolas |  |  |  |  |  |  |  |
| Arleras with special | $10^{\prime}$ | $3 \times$ | $7 \times$ | $\begin{aligned} & \times 0.6 \text { Stun } \\ & \times 1.5 \text { Grapple } \end{aligned}$ | - | 7 | $11 / 4$ |
| Bolas | $10^{\prime}$ | $5 \times$ | $10 \times$ | $\times 2.0$ Grapple | - | 10 | 3 |
| Surujin with special | $10^{\prime}$ | $3 \times$ | $10 \times$ | $\begin{aligned} & \times 1.0 \text { Stun } \\ & \times 2.0 \text { Grapple } \end{aligned}$ | - | 11 | 4 |
| Boomerang |  |  |  |  |  |  |  |
| Boomerang | $10^{\prime}$ | $4 \times$ | $40 \times$ | $\times 0.5$ Crush | - | 3 | 1 |
| Light Boomerang | $10^{\prime}$ | $2 \times$ | $20 \times$ | $\times 0.3$ Stun | - | 1 | $1 / 4$ |
| Throwing Stick | $10^{\prime}$ | $3 \times$ | $30 \times$ | $\times 0.6$ Stun | - | 3 | 1 |
| Throwing Club | $10^{\prime}$ | $6 \times$ | $60 \times$ | $\times 1.0$ Crush | - | 9 | 3 |
| Crossbow |  |  |  |  |  |  |  |
| Dwarven Crossbow $\ddagger$ | $20^{\prime}$ | $8 \times$ | $80 \times$ | missile | - | 7 | 12 |
| Crossbow | $30^{\prime}$ | $6 \times$ | $70 \times$ | missile | - | 7 | 8 |
| Prodd | $20^{\prime}$ | $4 \times$ | $40 \times$ | $\times$ 1.0 Stun | - | 7 | 6 |
| Handgun |  |  |  |  |  |  |  |
| Heavy Flintlock Pistol | $10^{\prime}$ | $50^{\prime}$ | $300{ }^{\prime}$ | 1d10 Crush | - | 10 | 5 |
| Light Flintlock Pistol | $5 '$ | $30^{\prime}$ | $200{ }^{\prime}$ | 1d6 Crush | - | 6 | 3 |
| Knife, Thrown |  |  |  |  |  |  |  |
| Dagger | 15' | $3 \times$ | $41 / 2 \times$ | $\times 0.5$ Impale | -8 | 4 | 1 |
| Throwing Dagger | $15^{\prime}$ | $3 \times$ | $41 / 2 \times$ | $\times 0.5$ Impale | - | 4 | 1 |
| Knife | 8' | $11 / 2 \times$ | $3 \times$ | $\times 0.4$ Impale | -8 | 2 | 1/2 |
| Throwing Knife | $8^{\prime}$ | $11 / 2 \times$ | $3 \times$ | $\times 0.4$ Impale | - | 2 | 1/2 |
| Stiletto | $8^{\prime}$ | $11 / 2 \times$ | $3 \times$ | $\times 0.3$ Impale | -8 | 1 | $1 / 4$ |
| Throwing Star | $8^{\prime}$ | $1 \times$ | $2^{1 / 2 \times}$ | $\times 0.3 \mathrm{Cut}$ | - | 1 | $1 / 4$ |

[^1]
## Weapon List

| Weapon | Short | Medium | Extreme | Damage | Skill | STR | Weight |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Shuriken | $6{ }^{\prime}$ | $3 / 4 \times$ | $2 \times$ | $\times 0.2 \mathrm{Cut}$ | - | 1 | 1/8 |
| Dart | $10^{\prime}$ | $11 / 2 \times$ | $3 \times$ | $\times 0.1$ Impale | - | 1 | 1/8 |
| Longarm |  |  |  |  |  |  |  |
| Arquebus | $8^{\prime}$ | $75^{\prime}$ | 450' | 1 d 10 Crush | - | 20 | 20 |
| Blunderbuss | $5 '$ | $30^{\prime}$ | $250 '$ | $1 \mathrm{~d} 8 \times 6$ Crush | +2 | 12 | 12 |
| Hand Gonne | 5' | $20^{\prime}$ | $150 '$ | $1 \mathrm{~d} 6 \times 6$ Crush | +2 | 5 | $21 / 2$ |
| Flintlock Musket | $10^{\prime}$ | $100 '$ | 600' | 1 d 8 Crush | - | 16 | 16 |
| Flintlock Rifle | $10^{\prime}$ | $150 '$ | 1,000' | 1d8 Crush | - | 11 | 11 |
| Sling |  |  |  |  |  |  |  |
| Sling | $25^{\prime}$ | $10 \times$ | $50 \times$ | $\times 0.8$ Crush | - | 4 | 1/2 |
| with lead bullet | $25^{\prime}$ | $10 \times$ | $50 \times$ | $\times 1.0$ Crush | - |  |  |
| with clay bullet | $25^{\prime}$ | $12 \times$ | $60 \times$ | $\times 0.6$ Crush | - |  |  |
| Staff Sling | $25^{\prime}$ | $20 \times$ | $45 \times$ | $\times 1.0$ Crush | - | 6 | $11 / 2$ |
| with lead bullet | $25^{\prime}$ | $18 \times$ | $40 \times$ | $\times 1.2$ Crush | - |  |  |
| Spear, Thrown |  |  |  |  |  |  |  |
| Javelin | $20^{\prime}$ | $4 \times$ | $71 / 2 \times$ | $\times 0.8$ Impale | - | 6 | 3 |
| Long Spear | $15^{\prime}$ | $3 \times$ | $4 \times$ | $\times 1.0$ Impale | -4 | 8 | $41 / 2$ |
| Short Spear | $20^{\prime}$ | $4 \times$ | $7 \times$ | $\times 0.8$ Impale | -4 | 6 | $31 / 2$ |
| War Dart | $15^{\prime}$ | $3 \times$ | $5 \times$ | $\times 0.7$ Impale | - | 5 | 2 |
| Rock, Thrown |  |  |  |  |  |  |  |
| Rock, well-balanced | $25^{\prime}$ | $5 \times$ | $10 \times$ | $\times 0.6$ Crush | -2 | - | 1 |
| Rock, typical | $15^{\prime}$ | $3 \times$ | $10 \times$ | $\times 0.6$ Crush | -8 | - | 1 |
| Shot, hollow iron ball | $25^{\prime}$ | $5 \times$ | $10 \times$ | $\times 0.6$ Crush | - | - | 1 |


| Penalty for Reach |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Reach | Contact | Same | 1 Hex | 2 Hex | 3 Hex |
| Close | -6 | 0 | $-6 \dagger$ | - | - |
| Short | -10 | -2 | 0 | - | - |
| Medium | -20 | -6 | 0 | - | - |
| Long | -30 | -10 | 0 | $-6 \dagger$ | - |
| Polearm | - | $-20 \ddagger$ | $0 \ddagger$ | $0 \ddagger$ | - |
| Extreme | - | - | $-10 \ddagger$ | $0 \ddagger$ | $0 \ddagger$ |
| $\quad \dagger$ Lunge: -1 | SR, -6 defense for one action |  |  |  |  |
| $\quad \ddagger$ Shift Grip: one action to change grip |  |  |  |  |  |


| Missile Attacks |  |  |  |
| :--- | :---: | :---: | :---: |
| Missile | Damage | -1 Damage per |  |
| Broad | $\times 1.2$ | 1 AP |  |
| Flight | $\times 0.6$ | 2 AP |  |
| Hunting | $\times 0.8$ | 2 AP |  |
| War | $\times 0.6$ | 4 AP |  |
| Quarrel | $\times 0.8$ | 3 AP |  |
| * replaces the impale of -1 |  | damage per 2 AP |  |

## High Quality Weapons

Only weapons without a skill penalty can have higher quality versions made.
Fine weapons cost twice as much, but are well-balanced giving $+5 \%$.
Very Fine weapons cost four times as much, but have excellent balance giving $+10 \%$.
Exceptionally Fine weapons cost eight times as much, but have superb balance giving $+15 \%$.

| Parry Value |  |  |  |
| :---: | :---: | :---: | :---: |
| adjSTR | Parry | adjSTR | Parry |
| $0.0-0.2$ | 0 | $70.2-75.3$ | 21 |
| $0.3-1.3$ | 1 | $75.4-80.6$ | 22 |
| $1.4-2.9$ | 2 | $80.7-86.0$ | 23 |
| $3.0-4.9$ | 3 | $86.1-91.6$ | 24 |
| $5.0-7.2$ | 4 | $91.7-97.3$ | 25 |
| $7.3-9.7$ | 5 | $97.4-103.0$ | 26 |
| $9.8-12.5$ | 6 | $103.1-108.9$ | 27 |
| $12.6-15.5$ | 7 | $109.0-114.9$ | 28 |
| $15.6-18.7$ | 8 | $115.0-121.0$ | 29 |
| $18.8-22.1$ | 9 | $121.1-127.2$ | 30 |
| $22.2-25.7$ | 10 | $127.3-133.6$ | 31 |
| $25.8-29.4$ | 11 | $133.7-140.0$ | 32 |
| $29.5-33.3$ | 12 | $140.1-146.5$ | 33 |
| $33.4-37.4$ | 13 | $146.6-153.1$ | 34 |
| $37.5-41.7$ | 14 | $153.2-159.8$ | 35 |
| $41.8-46.1$ | 15 | $159.9-166.6$ | 36 |
| $46.2-50.6$ | 16 | $166.7-173.5$ | 37 |
| $50.7-55.3$ | 17 | $173.6-180.5$ | 38 |
| $55.4-60.1$ | 18 | $180.6-187.6$ | 39 |
| $60.2-65.0$ | 19 | $187.7-194.7$ | 40 |
| $65.1-70.1$ | 20 | $194.8-202.0$ | 41 |


| Mounted Damage |  |
| :--- | :---: |
| Size | Factor |
| Very Tiny | $\times 1 / 30$ |
| Tiny | $\times 1 / 15$ |
| Very Small | $\times 1 / 8$ |
| Small | $\times 1 / 4$ |
| Medium Small | $\times 1 / 2$ |
| Medium | $\times 1$ |
| Medium Large | $\times 2$ |
| Large | $\times 4$ |
| Very Large | $\times 8$ |
| Huge | $\times 15$ |
| Enormous | $\times 30$ |
| Titanic | $\times 60$ |
| Gargantuan | $\times 120$ |
| Multiply movement by size factor |  |
| to find the base STR for the attack. |  |

## Damage for STR

| adjSTR | Damage | adjSTR | Damage |
| :---: | :---: | :---: | :---: |
| 0.00-0.08 | - | 1453.68-1565.04 | 21d12 |
| 0.09-0.47 | 1d2-1 | 1565.05-1679.30 | 22 d 12 |
| 0.48-1.04 | 1 d 3 -1 | 1679.31-1796.39 | 23 d 12 |
| 1.05-1.76 | 1d4-1 | 1796.40-1916.26 | 24d12 |
| 1.77-2.60 | 1 d 3 | 1916.27-2038.84 | 25d12 |
| 2.61-4.06 | 1 d 4 | 2038.85-2164.10 | 26d12 |
| 4.07-6.34 | 1 d 6 | 2164.11-2291.99 | 27 d 12 |
| 6.35-8.96 | 1 d 8 | 2292.00-2422.46 | 28 d 12 |
| 8.97-11.89 | 1 d 10 | 2422.47-2555.47 | 29d12 |
| 11.90-14.27 | 1 d 12 | 2555.48-2690.99 | 30 d 12 |
| 14.28-16.81 | 2 d 6 | 2691.00-2828.97 | 31 d 12 |
| 16.82-20.40 | $1 \mathrm{~d} 6+1 \mathrm{~d} 8$ | 2828.98-2969.38 | 32 d 12 |
| 20.41-24.24 | 2 d 8 | 2969.39-3112.19 | 33 d 12 |
| 24.25-28.31 | $1 \mathrm{~d} 8+1 \mathrm{~d} 10$ | 3112.20-3257.36 | 34 d 12 |
| 28.32-32.60 | 2 d 10 | 3257.37-3404.87 | 35 d 12 |
| 32.61-37.10 | $1 \mathrm{~d} 10+1 \mathrm{~d} 12$ | 3404.88-3554.68 | 36 d 12 |
| 37.11-40.61 | 2d12 | 3554.69-3706.77 | 37 d 12 |
| 40.62-44.23 | 3 d 8 | 3706.78-3861.10 | 38d12 |
| 44.24-49.22 | $2 \mathrm{~d} 8+1 \mathrm{~d} 10$ | 3861.11-4017.65 | 39 d 12 |
| 49.23-54.40 | $1 \mathrm{~d} 8+2 \mathrm{~d} 10$ | 4017.66-4176.40 | 40d12 |
| 54.41-59.76 | 3 d 10 | 4176.41-4337.32 | 41d12 |
| 59.77-65.29 | $2 \mathrm{~d} 10+1 \mathrm{~d} 12$ | 4337.33-4500.39 | 42 d 12 |
| 65.30-71.00 | $1 \mathrm{~d} 10+2 \mathrm{~d} 12$ | 4500.40-4665.58 | 43 d 12 |
| 71.01-75.39 | 3 d 12 | 4665.59-4832.87 | 44 d 12 |
| 75.40-79.88 | 2d8+2d10 | 4832.88-5002.24 | 45 d 12 |
| 79.89-86.00 | $1 \mathrm{~d} 8+3 \mathrm{~d} 10$ | 5002.25-5173.67 | 46d12 |
| 86.01-92.28 | 4 d 10 | 5173.68-5347.15 | 47d12 |
| 92.29-98.71 | $3 \mathrm{~d} 10+1 \mathrm{~d} 12$ | 5347.16-5522.64 | 48d12 |
| 98.72-105.30 | $2 \mathrm{~d} 10+2 \mathrm{~d} 12$ | 5522.65-5700.13 | 49 d 12 |
| 105.31-112.03 | $1 \mathrm{~d} 10+3 \mathrm{~d} 12$ | 5700.14-5879.61 | 50 d 12 |
| 112.04-117.18 | 4 d 12 | 5879.62-6061.06 | 51d12 |
| 117.19-122.41 | $1 \mathrm{~d} 8+4 \mathrm{~d} 10$ | 6061.07-6244.45 | 52 d 12 |
| 122.42-129.51 | 5 d 10 | 6244.46-6429.77 | 53 d 12 |
| 129.52-136.75 | $4 \mathrm{~d} 10+1 \mathrm{~d} 12$ | 6429.78-6617.01 | 54 d 12 |
| 136.76-144.13 | $3 \mathrm{~d} 10+2 \mathrm{~d} 12$ | 6617.02-6806.15 | 55d12 |
| 144.14-151.64 | $2 \mathrm{~d} 10+3 \mathrm{~d} 12$ | 6806.16-6997.17 | 56 d 12 |
| 151.65-159.29 | $1 \mathrm{~d} 10+4 \mathrm{~d} 12$ | 6997.18-7190.06 | 57 d 12 |
| 159.30-189.15 | 5 d 12 | 7190.07-7384.80 | 58 d 12 |
| 189.16-245.05 | 6d12 | 7384.81-7581.38 | 59 d 12 |
| 245.06-305.90 | 7 d 12 | 7581.39-7779.79 | 60 d 12 |
| 305.91-371.40 | 8 d 12 | 7779.80-7980.01 | 61 d 12 |
| 371.41-441.28 | 9 d 12 | 7980.02-8182.03 | 62 d 12 |
| 441.29-515.33 | 10 d 12 | 8182.04-8385.84 | 63 d 12 |
| 515.34-593.37 | 11d12 | 8385.85-8591.42 | 64 d 12 |
| 593.38-675.23 | 12 d 12 | 8591.43-8798.75 | 65 d 12 |
| 675.24-760.78 | 13 d 12 | 8798.76-9007.84 | 66d12 |
| 760.79-849.89 | 14 d 12 | 9007.85-9218.67 | 67 d 12 |
| 849.90-942.45 | 15 d 12 | 9218.68-9431.21 | 68 d 12 |
| 942.46-1038.35 | 16d12 | 9431.22-9645.48 | 69 d 12 |
| 1038.36-1137.51 | 17 d 12 | 9645.49-9861.44 | 70 d 12 |
| 137.52-1239.83 | 18 d 12 | 9861.45-10079.10 | 71 d 12 |
| 239.84-1345.24 | 19 d 12 | 10079.11-10298.43 | 72 d 12 |
| 345.25-1453.67 | 20 d 12 | 10298.44-10519.44 | 73 d 12 |

## Fumble Table

Roll Result
01-16 SLIP: Off balance, cannot dodge for the remainder of the round.
17-24 TrIP: Lose balance and next weapon action while regaining it.
25-28 FALL DOwn: Roll DEX/20 or drop whatever is held.
29, 30 FALL DOWN: Drop held and roll AGI/20 or take damage as for a ten foot fall.
31-46 GRIP SLIPS: Lose next action with the fumbled weapon while regaining grip.
47-54 WIDE OPEN: +6 to be hit for the rest of the round and lose next weapon action recovering.
55-58 DROP WEAPON: Weapon falls into the same hex.
59, 60 FLing WEApon: Weapon is thrown (but not effective for damage) 1 d 6 hexes in a random direction.
61-76 STRAIN: 2 penalty with limb $\dagger$ (two strains become a sprain).
77-84 Sprain: 6 penalty with limb $\dagger$ and take 1 point of damage for every CON rounds of continued use (two sprains become a torn muscle).
85-88 TORN MUSCLE: 10 penalty with limb $\dagger$ and take immediate damage equal to the minimum for a half serious wound level and take that additionally for every CON rounds of continued use.
89, 90 Dislocated joint: Unable to use limb $\dagger$ and take immediate damage equal to serious wound level.
91-94 Fumble badLy: Reroll twice and apply both results (including additional rerolls).
95-97 Hit SELFł: Do half normal damage.
98, 99 Hit self $\ddagger$ : Do normal damage.
100 Hit SELFł: Do twice normal damage.
$\dagger$ Roll 1d4: $1=$ Right leg, $2=$ Left leg, $3=$ Right arm, $4=$ Left arm
Leg: Movement halved, Agility skills penalized
Arm: Weapon, Agility and Manipulation skills penalized $\neq$ Injured location is chosen by referee

## Combat Modifiers

Item
Mod
Height or Posture
Attack with 3' + height advantage +2
Such as defender kneeling
Fighting from knees
Fighting from ground $\quad-10$

## Ranged Attacks

Cannot parry missile weapons, only thrown
Defense vs ranged at Medium +2
Defense vs ranged past Medium +6
Attacker aimed previous round $\dagger \quad+6$
Aiming precludes any other activity, can trade
bonus for choice of general location to be hit

## Openness

All-out retreating (Dodge modifier) +6
Target is "wide open" (net) +6
Automatic if defender fails defense roll
Target is unaware (additional) +6
Attack from behind is normally "unaware"

## Movement

Character is running $(2 \times$ move $) \quad-2$
Character is sprinting $(3 \times$ move $) \quad-6$
Target is stationary +2
Target is moving ( $n$ hexes per SR) $-2 n$
Attacker is moving ( $n$ hexes per SR) $-6 n$
Attacker moved previous SR $\quad-2 n$
Target is in the air (hovering) -3
Miscellaneous
Riposte vs. Failed/Fumbled attack +6

| Illumination |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Quality | Clear | Cloudy | Overcast | Dark |
| Blinding | -300 | -300 | -300 | -300 |
| Evening | - | - | - | -3 |
| Twilight | -1 | -7 | -14 | -19 |
| Deep Twilight | -14 | -20 | -27 | -32 |
| Full Moon | -2 | -8 | -15 | -20 |
| Gibbous Moon | -5 | -11 | -18 | -23 |
| Half Moon | -8 | -14 | -21 | -26 |
| Crescent Moon | -14 | -20 | -27 | -32 |
| Starlight | -16 | -22 | -29 | -34 |
| Torchlight | -4 | -10 | -17 | -22 |

## STR Requirements

The minimum STR listings for melee and thrown weapons assume a Medium-sized character. To find the actual minimum STR for smaller or larger characters use this table. Larger characters use the row closest to the minSTR listing for the weapon not exceeding their size. That is, a Gargantuansized character wielding a weapon with a nominal minimum STR of 90 would use the row for Huge characters, but a Very Large-sized character would still use the Very Large row.

| Size | minSTR $\geq$ | actual minSTR |
| :--- | :---: | :--- |
| Tiny | 1 | $5 \times$ STR |
| Very Small | 3 | $4 \times$ STR -9 |
| Small | 5 | $3 \times$ STR -10 |
| Medium Small | 8 | $2 \times$ STR -8 |
| Medium Large | 16 | $3 / 4 \times$ STR +4 |
| Large | 24 | $1 / 2 \times$ STR +10 |
| Very Large | 40 | $1 / 4 \times$ STR +20 |
| Huge | 70 | $1 / 10 \times$ STR +30 |
| Enormous | 100 | $1 / 20 \times$ STR +35 |
| Titanic | 200 | $1 / 40 \times$ STR +40 |
| Gargantuan | 400 | $1 / 80 \times$ STR +45 |



Tim Doty

| Cluster Fire Hits |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Shots | 1 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 23 | 26 | 30 |
| 99\% | 115' | 58' | $38^{\prime}$ | 29 | $23 '$ | $19^{\prime}$ | 14 | $11^{\prime}$ | $9^{\prime}$ | 8' | $7{ }^{\prime}$ | $6{ }^{\prime}$ | $6{ }^{\prime}$ | 5' | $4^{\prime}$ | $4^{\prime}$ |
| 90\% | 121' | $60^{\prime}$ | 40' | 30' | $24^{\prime}$ | $20^{\prime}$ | 15 | $12^{\prime}$ | $10^{\prime}$ | $9^{\prime}$ | 8' | $7{ }^{\prime}$ | $7{ }^{\prime}$ | - | $5^{\prime}$ | - |
| 75\% | 132' | $66^{\prime}$ | $44^{\prime}$ | $33^{\prime}$ | $26^{\prime}$ | $22^{\prime}$ | $17{ }^{\prime}$ | $13 '$ | 11' | $10^{\prime}$ | $9 '$ | $8{ }^{\prime}$ | $8 '$ | $6{ }^{\prime}$ | $6{ }^{\prime}$ | - |
| 50\% | 162 ' | 81' | $54^{\prime}$ | $41^{\prime}$ | 32' | 27 | $20^{\prime}$ | $16^{\prime}$ | $14^{\prime}$ | $12^{\prime}$ | $10^{\prime}$ | $9 '$ | $9 '$ | $7{ }^{\prime}$ | $7{ }^{\prime}$ | 5' |
| 25\% | 229 ' | 115' | 76 | 571 | 46 | $38^{\prime}$ | $29^{\prime}$ | $23^{\prime}$ | 19' | $16^{\prime}$ | $14^{\prime}$ | $13 '$ | 11' | $10 '$ | $9 '$ | $8 '$ |
| 10\% | $362{ }^{\prime}$ | 181' | 121' | 91' | $72^{\prime}$ | $60^{\prime}$ | 45' | 36 | $30^{\prime}$ | $26^{\prime}$ | $23^{\prime}$ | $20^{\prime}$ | $18^{\prime}$ | $16{ }^{\prime}$ | $14^{\prime}$ | $12^{\prime}$ |
| 1\% | 1,146' | 573' | 382' | 286' | 229' | 191' | 143' | 115' | 95' | 82' | 72 | 64' | $57^{\prime}$ | $50 '$ | 44' | $38^{\prime}$ |

Modern Weapons
Category/Type Short Medium Extreme Damage Shots RoF Rcl CR

| "Real" |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| High Standard . 22 | $10^{\prime}$ | $28^{\prime}$ | 3,150' | $1 \mathrm{~d} 6 \times 3$ | 10+ | S | 2 | - |
| High Standard Derringer |  | $13 '$ | 4,350' | $1 \mathrm{~d} 6 \times 8$ | 2 | S | 6 | - |
| Remington XP 100 | $10^{\prime}$ | $60^{\prime}$ | 7,950' | $1 \mathrm{~d} 6 \times 51$ | 1 | B | 4 | - |
| Colt SCAMP | $10^{\prime}$ | $23^{\prime}$ | 5,175' | $1 \mathrm{~d} 4 \times 36$ | 27+ | 15* | 3 | 36 |
| Vz 61 Skorpion | $10^{\prime}$ | $25^{\prime}$ | 3,585' | $1 \mathrm{~d} 6 \times 15$ | 10, 20+ | 8 | 3 | 64 |
| Mauser M32 <br> with stock | $10^{\prime}$ | $\begin{aligned} & 25^{\prime} \\ & 60^{\prime} \end{aligned}$ | 5,400' | $1 \mathrm{~d} 6 \times 28$ | 10, 20 | 9 | 4 | 72 |
| Beretta M92S | $10^{\prime}$ | $25^{\prime}$ | 6,040' | $1 \mathrm{~d} 6 \times 25$ | 15+ | S | 4 | - |
| Colt M1911A1 | $10^{\prime}$ | $25^{\prime}$ | 4,390' | $1 \mathrm{~d} 8 \times 27$ | 7+ | S | 5 | - |
| Colt Python | $10^{\prime}$ | $23 '$ | 4,440' | $1 \mathrm{~d} 8 \times 11$ | 6 | R | 5 | - |
| Uzi | $30^{\prime}$ | $75^{\prime}$ | 6,000' | $1 \mathrm{~d} 6 \times 33$ | 25, 32 | 6 | 2 | 40 |
| M16A1 | $50 '$ | 150' | 8,000' | $1 \mathrm{~d} 4 \times 171$ | 20,30+ | 8 | 2 | 12 |
| Springfield M1903 | $50^{\prime}$ | 225' | 11,000' | $1 \mathrm{~d} 6 \times 256$ | 5+ | B | 4 | - |
| . 460 Weatherby Mk V | $50^{\prime}$ | 375' | 20,000' | $1 \mathrm{~d} 8 \times 1009$ | $3+$ | B | 6 | - |


| Pixie Weapon | Short | Medium | Extreme | Damage | Skill | STR | Weight |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Archery |  |  |  |  |  |  |  |
| Bow | $7{ }^{\prime}$ | $8 \times$ | $40 \times$ | missile $\times 0.1$ | - | 1 | $1 / 4$ |
| Crossbow |  |  |  |  |  |  |  |
| Crossbow | $5^{\prime}$ | $6 \times$ | $30 \times$ | missile $\times 0.2$ | - | 2 | 1/2 |
| Heavy Crossbow | 5' | $9 \times$ | $45 \times$ | missile $\times 0.3$ | - | 3 | $3 / 4$ |
| Spear, Thrown |  |  |  |  |  |  |  |
| Javelin | 3' | $3 \times$ | $5 \times$ | $\times 0.1$ Impale | - | 2 | $1 / 4$ |
| with throwing strap | $5 '$ | $5 \times$ | $8 \times$ | $\times 0.2$ Impale | -10\% | 2 | 1/4 |
| Spear | $5 '$ | $4 \times$ | $7 \times$ | $\times 0.2$ Impale | - | 3 | 1/2 |

Category/Pixie Weapon Reach Damage Skill Parry AP/HP STR** Weight
Axe, 1 H
Axe
C $\quad \times$ 1.8 Stun

Axe, 2 H
Large Axe
C $\times$ 1.2 Stun

- /

Club, 1 H
Ball \& Chain $\quad$ C $\quad \times 1.8$ Stun
Club, 2 H
Grain Flail $\quad$ C $\times$ 1.2 Stun
Knife
Dagger
thrust
Spear, $1 H$
Javelin
C $\times 0.1$ Impale

- $\quad 1 \quad 1 / 4$

Spear, 2H

Javelin
Spear
Sword, 1 H
Sword
Sword, 2 H
Great Sword
S $\quad \times$ 1.2 Stun

## Shields

| Shield | Type | Openness† | Block $\ddagger$ | HP | STR | Weight | Size |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Small Buckler | Light | - | 7 | 3 | 3 | $3 / 4$ | $1 / 4^{\prime \prime} \times 1$ ' diameter |
|  | Medium | - | 10 | 4 | 3 | 1 | $3 / 8 " \times 1$ diameter |
|  | Heavy | - | 14 | 5 | 4 | $11 / 4$ | $1 / 2^{\prime \prime} \times 1$ diameter |
|  | Massive | - | 20 | 8 | 5 | 2 | $3 / 4{ }^{\prime \prime} \times 1{ }^{\prime \prime}$ diameter |
| Buckler | Light | 1 | 7 | 6 | 4 | $11 / 2$ | $1 / 4^{\prime \prime} \times 11 / 2^{\prime}$ diameter |
|  | Medium | 1 | 10 | 8 | 5 | 2 | $3 / 8{ }^{\prime \prime} \times 1 / 1 / 2$ diameter |
|  | Heavy | 1 | 14 | 11 | 6 | 23/4 | $1 / 2^{\prime \prime} \times 11 / 2^{\prime}$ diameter |
|  | Massive | 1 | 20 | 16 | 7 | 4 | $3 / 4 \times 11 / 2^{\prime}$ diameter |
| Large Buckler | Light | 2 | 7 | 10 | 5 | 21/2 | $1 / 4{ }^{\prime \prime} \times 2$ diameter |
|  | Medium | 2 | 10 | 14 | 6 | $31 / 2$ | $3 / 8 \prime \prime \times 2$ diameter |
|  | Heavy | 2 | 14 | 19 | 8 | $43 / 4$ | $1 / 2^{\prime \prime} \times 2^{\prime}$ diameter |
|  | Massive | 2 | 20 | 28 | 9 | 7 | $3 / 4 \prime \prime \times 2^{\prime}$ diameter |
| Small Round | Light | 2 | 7 | 10 | 4 | $21 / 2$ | $1 / 4 \prime \prime \times 2$ diameter |
|  | Medium | 2 | 10 | 14 | 5 | $31 / 2$ | $3 / 8^{\prime \prime} \times 2$ ' diameter |
|  | Heavy | 2 | 14 | 19 | 6 | $43 / 4$ | $1 / 2^{\prime \prime} \times 2^{\prime}$ diameter |
|  | Massive | 2 | 20 | 28 | 7 | 7 | $3 / 4 \prime \prime \times 2$ diameter |
| Round | Light | 3 | 7 | 21 | 6 | 51/4 | $1 / 4 \prime \prime \times 3$ diameter |
|  | Medium | 3 | 10 | 32 | 8 | 8 | $3 / 8{ }^{\prime \prime} \times 3$ ' diameter |
|  | Heavy | 3 | 14 | 42 | 9 | $101 / 2$ | $1 / 2^{\prime \prime} \times 3$ ' diameter |
|  | Massive | 3 | 20 | 63 | 11 | 153/4 | $3 / 4{ }^{\prime \prime} \times 3$ ' diameter |
| Large Round | Light | 4 | 7 | 37 | 9 | $91 / 4$ | $1 / 4{ }^{\prime \prime} \times 4$ diameter |
|  | Medium | 4 | 10 | 56 | 11 | 14 | $3 / 88^{\prime \prime} \times 4$ diameter |
|  | Heavy | 4 | 14 | 74 | 12 | 181/2 | $1 / 2^{\prime \prime} \times 4$ diameter |
|  | Massive | 4 | 20 | 112 | 15 | 28 | $3 / 4 " \times 4$ diameter |
| Heater | Light | 4 | 7 | 11 | 5 | $2^{3 / 4}$ | $1 / 4^{\prime \prime} \times 3^{\prime \prime} \times 4^{\prime}$ taper |
|  | Medium | 4 | 10 | 16 | 6 | 4 | $3 / 8 " \times 3^{\prime} \times 4^{\prime}$ taper |
|  | Heavy | 4 | 14 | 21 | 6 | 51/4 | $1 / 2^{\prime \prime} \times 3^{\prime} \times 4^{\prime}$ taper |
|  | Massive | 4 | 20 | 31 | 8 | $73 / 4$ | $3 / 4^{\prime \prime} \times 3^{\prime} \times 4^{\prime \prime}$ taper |
| Kite | Light | 6 | 7 | 13 | 5 | $31 / 4$ | $1 / 44^{\prime \prime} \times 2^{1 / 2} 2^{\prime} \times 5^{\prime}$ teardrop |
|  | Medium | 6 | 10 | 19 | 6 | $43 / 4$ | $3 / 8^{\prime \prime} \times 2^{1 / 2} 1^{\prime} \times 5^{\prime}$ teardrop |
|  | Heavy | 6 | 14 | 25 | 7 | $61 / 4$ | $1 / 2^{\prime \prime} \times 2^{1 / 2}{ }^{\prime} \times 5^{\prime}$ teardrop |
|  | Massive | 6 | 20 | 37 | 9 | $91 / 4$ | $3 / 4^{\prime \prime} \times 2^{1 / 2} 2^{\prime} \times 5^{\prime}$ teardrop |
| Door | Light | 8 | 7 | 62 | 11 | 151/2 | $1 / 4^{\prime \prime} \times 31 / 2^{\prime} \times 6^{\prime}$ |
|  | Medium | 8 | 10 | 94 | 14 | $231 / 2$ | $3 / 8{ }^{\prime \prime} \times 3{ }^{1 / 2} 2^{\prime} \times 6^{\prime}$ |
|  | Heavy | 8 | 14 | 124 | 16 | 31 | $1 / 22^{\prime \prime} \times 31 / 2^{\prime} \times 6^{\prime}$ |
|  | Massive | 8 | 20 | 188 | 19 | 47 | $3 / 4^{\prime \prime} \times 3{ }^{1 / 2} 2^{\prime} \times 6^{\prime}$ |
| Scutum | Light | 4 | 7 | 30 | 8 | $71 / 2$ | $1 / 4^{\prime \prime} \times 2{ }^{1 / 2^{\prime} \times 4^{\prime}}$ |
|  | Medium | 4 | 10 | 45 | 9 | $111 / 4$ | $3 / 8{ }^{\prime \prime} \times 2{ }^{1 / 2} 2^{\prime} \times 4$ |
|  | Heavy | 4 | 14 | 59 | 11 | $143 / 4$ | $1 / 2 \prime \times 21 / 2^{\prime} \times 4^{\prime}$ |
|  | Massive | 4 | 20 | 88 | 13 | 22 | $3 / 4{ }^{\prime \prime} \times 2^{1 / 2} \mathbf{2}^{\prime} \times 4^{\prime}$ |

$\dagger$ Penalty to be hit
$\neq$ Maximum damage blocked
These shields are made of plywood, faced with leather and have iron fittings. Such shields have AP 2. A bare wooden shield has AP 1. A metal shield would have AP 1, 2, 3 or 4 (by type), be one-eighth as thick with $5^{1 / 4}$ times as many HP and weigh $1 \frac{1}{3}$ times as much.

Modern Weapons
Category/Type
Damage Short Medium Extreme Shots RoF Rcl CR
Handgun

| High Standard .22 | $1 \mathrm{~d} 3 ; 6$ | $10^{\prime}$ | $28^{\prime}$ | $3150^{\prime}$ | $10+$ | S | 2 | - |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| High Standard Derringer | $1 \mathrm{~d} 6 ; 8$ | $5^{\prime}$ | $13^{\prime}$ | $4350^{\prime}$ | 2 | S | 6 | - |
| Remington XP 100 | $2 \mathrm{~d} 8 ; 20$ | $10^{\prime}$ | $60^{\prime}$ | $7950^{\prime}$ | 1 | B | 4 | - |
| Colt SCAMP | $1 \mathrm{~d} 10 ; 16$ | $10^{\prime}$ | $23^{\prime}$ | $5175^{\prime}$ | $27+$ | $15^{*}$ | 3 | 36 |
| Vz 61 Skorpion | $1 \mathrm{~d} 6 ; 15$ | $10^{\prime}$ | $25^{\prime}$ | $3,585^{\prime}$ | $10,20+$ | 8 | 3 | 64 |
| Mauser M32 | $1 \mathrm{~d} 10 ; 18$ | $10^{\prime}$ | $25^{\prime}, 60^{\prime}$ | $5,400^{\prime}$ | 10,20 | 9 | 4 | 72,40 |
| Beretta M92S | $1 \mathrm{~d} 10 ; 16$ | $10^{\prime}$ | $25^{\prime}$ | $6,040^{\prime}$ | $15+$ | S | 4 | - |
| Colt M1911A1 | $1 \mathrm{~d} 10 ; 22$ | $10^{\prime}$ | $25^{\prime}$ | $4,390^{\prime}$ | $7+$ | S | 5 | - |
| Colt Python (long barrel) $1 \mathrm{~d} 6+1 \mathrm{~d} 8 ; 17$ | $10^{\prime}$ | $23^{\prime}$ | $4,440^{\prime}$ | 6 | R | 5 | - |  |
| Uzi | 1d12; 18 | $30^{\prime}$ | $75^{\prime}$ | $6,000^{\prime}$ | 25,32 | 6 | 2 | 40 |
| M16A1 | 2d12; 33 | $50^{\prime}$ | $150^{\prime}$ | $8,000^{\prime}$ | $20,30+$ | 8 | 2 | 12 |
| Springfield M1903 | 1d8+3d10; 43 | $50^{\prime}$ | $225^{\prime}$ | $11,000^{\prime}$ | $5+$ | B | 4 | - |
| 460 Weatherby Mk V | 7d12; 100 | $50^{\prime}$ | $375^{\prime}$ | $20,000^{\prime}$ | $3+$ | B | 6 | - |
| Light Hideout | 1d4 Imp, $\times 4$ | $5^{\prime}$ | $10^{\prime}$ | $300^{\prime}$ | 6 | S | 2 | - |
| Medium Hideout | 1d6 Imp, $\times 6$ | $5^{\prime}$ | $10^{\prime}$ | $450^{\prime}$ | 4 | S | 4 | - |
| Heavy Hideout | 1d8 Imp, $\times 3$ | $5^{\prime}$ | $10^{\prime}$ | $400^{\prime}$ | 2 | S | 6 | - |
| Magnum Hideout | 1d6 Imp, $\times 10$ | $5^{\prime}$ | $15^{\prime}$ | $600^{\prime}$ | 2 | S | 8 | - |
| Light Pistol $\dagger$ | 1d4 Imp, $\times 5$ | $10^{\prime}$ | $25^{\prime}$ | $1000^{\prime}$ | 10 | S | 1 | - |
| Medium Pistol $\dagger$ | 1d6 Imp, $\times 8$ | $10^{\prime}$ | $30^{\prime}$ | $1500^{\prime}$ | 15 | S | 3 | - |
| Heavy Pistol $\dagger$ | 1d8 Imp, $\times 4$ | $10^{\prime}$ | $20^{\prime}$ | $1200^{\prime}$ | 7 | S | 4 | - |
| Magnum Pistol $\dagger$ | 1d6 Imp, $\times 12$ | $10^{\prime}$ | $40^{\prime}$ | $2000^{\prime}$ | 7 | S | 5 | - |
| Elephant Pistol $\dagger$ | 1d8 Imp, $\times 8$ | $10^{\prime}$ | $30^{\prime}$ | $1500^{\prime}$ | 6 | S | 8 | - |

## Longarm

| Light Carbine | $1 \mathrm{~d} 4 \mathrm{Imp}, \times 6$ | $50 '$ | $150{ }^{\prime}$ | 5000' | 10 | S | 1/2 | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Medium Carbine | $1 \mathrm{~d} 6 \mathrm{Imp}, \times 10$ | $60^{\prime}$ | $200{ }^{\prime}$ | 6000' | 10 | S | 1 | - |
| Heavy Carbine | $1 \mathrm{~d} 8 \mathrm{Imp}, \times 5$ | 50' | 175' | 5000' | 10 | S | 2 | - |
| Light Rifle | $1 \mathrm{~d} 4 \mathrm{Imp}, \times 10$ | $75 '$ | $300{ }^{\prime}$ | $7000{ }^{\prime}$ | 8 | B | 2 | - |
| Medium Rifle | 1 d 6 Imp, $\times 20$ | $75 '$ | $450{ }^{\prime}$ | $10000{ }^{\prime}$ | 6 | B | 5 | - |
| Heavy Rifle | 1 d 8 Imp, $\times 15$ | $75 '$ | $400{ }^{\prime}$ | 8000' | 5 | B | 8 | - |
| Magnum Rifle | $1 \mathrm{~d} 6 \mathrm{Imp}, \times 30$ | $100^{\prime}$ | $600{ }^{\prime}$ | $12000{ }^{\prime}$ | 5 | B | 10 | - |
| Elephant Rifle | 1 d 8 Imp, $\times 25$ | $100 '$ | 500 | $10000{ }^{\prime}$ | 3 | B | 12 | - |


| Category/Type Shor | Medium | Extreme | Damage | Sights | STR | Weight | Shots | RoF | Rcl | $C R$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Handgun |  |  |  |  |  |  |  |  |  |  |
| High Standard . 2210 | $28^{\prime}$ | 3,150' | $1 \mathrm{~d} 6 \times 3,1 \mathrm{~d} 4$ | - | - | 21/2 | 10+ | S | 2 | - |
| High Standard Derringer 5 | $13 '$ | 4,350' | $1 \mathrm{~d} 6 \times 8,1 \mathrm{~d} 4$ | - | - | 1/2 | 2 | S | 6 | - |
| Remington XP 10010 | $60^{\prime}$ | 7,950' | $1 \mathrm{~d} 6 \times 51,1 \mathrm{~d} 8$ | - | - | $33 / 4$ | 1 | B | 4 | - |
| Colt SCAMP 10 | $23 '$ | 5,175' | $1 \mathrm{~d} 4 \times 36,1 \mathrm{~d} 6$ | - | - | $21 / 4$ | 27+ | 15* | 3 | 36 |
| Vz 61 Skorpion 10 | $25 '$ | 3,585' | $1 \mathrm{~d} 6 \times 15,1 \mathrm{~d} 4$ | - | - | 23/4 | 10, 20+ | 8 | 3 | 64 |
| Mauser M32 <br> with stock | $\begin{aligned} & 25^{\prime} \\ & 60^{\prime} \end{aligned}$ | 5,400' | $1 \mathrm{~d} 6 \times 28,1 \mathrm{~d} 6$ | - | - | $21 / 2$ | 10, 20 | 9 | 4 | 72 40 |
| Beretta M92S 10 | $25^{\prime}$ | 6,040' | $1 \mathrm{~d} 6 \times 25,1 \mathrm{~d} 6$ | - | - | 2 | 15+ | S | 4 | - |
| Colt M1911A1 10 | $25 '$ | 4,390' | $1 \mathrm{~d} 8 \times 27,1 \mathrm{~d} 6$ | - | - | $21 / 2$ | 7+ | S | 5 | - |
| Colt Python 10 | $23 '$ | 4,440' | $1 \mathrm{~d} 8 \times 11,1 \mathrm{~d} 8$ | - | - | $31 / 4$ | 6 | R | 5 | - |
| Longarm |  |  |  |  |  |  |  |  |  |  |
| Uzi 30 | 75 | 6,000' | $1 \mathrm{~d} 6 \times 33,1 \mathrm{~d} 6$ | - | - | 8 | 25, 32 | 6 | 2 | 40 |
| M16A1 50 | $150 '$ | 8,000' | $1 \mathrm{~d} 4 \times 171,1 \mathrm{~d} 10$ | - | - | 7 | 20, 30+ | 8 | 2 | 12 |
| Springfield M1903 50 | 225' | 11,000' | $1 \mathrm{~d} 6 \times 256,1 \mathrm{~d} 12$ | - | - | 9 | 5+ | B | 4 | - |
| . 460 Weatherby Mk V 50 | 375' | 20,000' | $1 \mathrm{~d} 8 \times 1009,1 \mathrm{~d} 8+1 \mathrm{~d} 10$ | - | - | $10^{1 / 2}$ | $3+$ | B | 6 | - |
| Handgun, TL 3 |  |  |  |  |  |  |  |  |  |  |
| Light Hideout (.25) | $13 '$ | 3,000' | $1 \mathrm{~d} 4 \times 3,1 \mathrm{~d} 4-1$ | - | 4 | $13 / 4$ | $6+$ | S | 3 | - |
| Medium Hideout (.38) | $13 '$ | 5,000' | $1 \mathrm{~d} 6 \times 10,1 \mathrm{~d} 4$ | - | 4 | 2 | $5+$ | S | 5 | - |
| Heavy Hideout (.45) | $13 '$ | 4,000' | $1 \mathrm{~d} 8 \times 18,1 \mathrm{~d} 4$ | - | 5 | $21 / 2$ | 4 | S | 8 | - |
| Magnum Hideout (.357) | $13 '$ | 3,500' | $1 \mathrm{~d} 8 \times 12,1 \mathrm{~d} 6$ | - | 6 | 3 | 4 | S | 8 | - |


| Hit Ratio | Tight Normal |  | Open | Hit Ratio | Tight | mal | Open | Hit Ratio | Tight Normal |  | Open |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 100\% | 36' | $29^{\prime}$ | $24^{\prime}$ | 66\% | $65 '$ | 52' | 44' | 32\% | 124' | $99^{\prime}$ | 83' |
| 98\% | $38^{\prime}$ | 31' | $26^{\prime}$ | 64\% | $68^{\prime}$ | $54^{\prime}$ | 45' | 30\% | $128^{\prime}$ | 102' | 85' |
| 96\% | $40^{\prime}$ | $32^{\prime}$ | $27^{\prime}$ | 62\% | $70^{\prime}$ | 56 | $47^{\prime}$ | 28\% | $132{ }^{\prime}$ | $106{ }^{\prime}$ | $88^{\prime}$ |
| 94\% | $42^{\prime}$ | $33^{\prime}$ | $28^{\prime}$ | 60\% | $73^{\prime}$ | $58^{\prime}$ | $49^{\prime}$ | 26\% | $137{ }^{\prime}$ | 110' | $92^{\prime}$ |
| 92\% | $43^{\prime}$ | $34^{\prime}$ | $29^{\prime}$ | 58\% | 76 | $60^{\prime}$ | $50^{\prime}$ | 24\% | 143 ' | $114{ }^{\prime}$ | $94^{\prime}$ |
| 90\% | $44^{\prime}$ | 36 | $30^{\prime}$ | 56\% | $79^{\prime}$ | $63^{\prime}$ | $52^{\prime}$ | 22\% | 149 ' | 119' | $100 '$ |
| 88\% | $46^{\prime}$ | 37 | $31^{\prime}$ | 54\% | $82^{\prime}$ | $65^{\prime}$ | $54^{\prime}$ | 20\% | $157{ }^{\prime}$ | 125' | 104' |
| 86\% | $47^{\prime}$ | $38^{\prime}$ | $32^{\prime}$ | 52\% | 85' | $68^{\prime}$ | 57 | 18\% | 165' | 132' | $110{ }^{\prime}$ |
| 84\% | $49^{\prime}$ | $39^{\prime}$ | 33' | 50\% | $89^{\prime}$ | $71^{\prime}$ | $59 '$ | 16\% | 175 | $140{ }^{\prime}$ | $117{ }^{\prime}$ |
| 82\% | $51^{\prime}$ | $40^{\prime}$ | $34^{\prime}$ | 48\% | $93 '$ | 74 | $62^{\prime}$ | 14\% | 187' | $150{ }^{\prime}$ | 125' |
| 80\% | $52^{\prime}$ | 42' | $35 '$ | 46\% | 97 | $77^{\prime}$ | $65^{\prime}$ | 12\% | 202' | 162' | 135' |
| 78\% | $54^{\prime}$ | 43' | $36^{\prime}$ | 44\% | 101' | $81^{\prime}$ | $68^{\prime}$ | 10\% | 221' | $177{ }^{\prime}$ | $148{ }^{\prime}$ |
| 76\% | 56 | $44^{\prime}$ | $37^{\prime}$ | 42\% | $108{ }^{\prime}$ | 86' | $72^{\prime}$ | 8\% | $247{ }^{\prime}$ | 198' | 165 ' |
| 74\% | 57 | $46^{\prime}$ | $38^{\prime}$ | 40\% | $111{ }^{\prime}$ | 89' | 74 | 6\% | 286 | 229 ' | 191' |
| 72\% | $59^{\prime}$ | 47' | $39^{\prime}$ | 38\% | 114 | $91^{\prime}$ | $76^{\prime}$ | 4\% | $350 '$ | 280' | 233 ' |
| 70\% | $61^{\prime}$ | 49' | 41' | 36\% | $117{ }^{\prime}$ | $93 '$ | $78^{\prime}$ | 2\% | 495' | $396{ }^{\prime}$ | $330^{\prime}$ |
| 68\% | $63^{\prime}$ | 51' | $42^{\prime}$ | 34\% | $120 '$ | $96{ }^{\prime}$ | $80^{\prime}$ | 1\% | 700 | $560{ }^{\prime}$ | $467{ }^{\prime}$ |

Using the column for the specified choke read down until the first number equal to or larger than the distance is encountered, then read across to find the hit ratio. Multiply the number of shots in the cluster, rounding down, to determine how many hit. Adjust the actual distance for the target's size by dividing by the Target Size Adjustment. The effective range is tripled for limb shots.

For example, an orc hit in the arm with a tight cluster of 52 projectiles at a range of 50 feet would use an effective range of 75 feet ( 50 feet $\times$ 3 for limb $\times 1 / 2$ for size) and so be hit by no more than $58 \%$ of the projectiles-or 30.16 which is rounded down to 30 projectiles.

| Target Size Adjustment |  |  |  |
| :--- | :---: | :--- | :---: |
| Size | Range | Size | Range |
| Extremely Tiny | $\times 60$ | Medium Large | $\times 1 / 2$ |
| Very Tiny | $\times 30$ | Large | $\times 1 / 4$ |
| Tiny | $\times 15$ | Very Large | $\times 1 / 8$ |
| Very Small | $\times 8$ | Huge | $\times 1 / 15$ |
| Small | $\times 4$ | Enormous | $\times 1 / 30$ |
| Medium Small | $\times 2$ | Titanic | $\times 1 / 60$ |
| Medium | $\times 1$ | Gargantuan | $\times 11120$ |

Shooting clusters gives a bonus of 3 for tight, 5 for normal and 8 for open choke.

Cluster Shot: Normal Choke

| Hits | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | Hits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 29 | 71' | 97 | 112' | 125' | 137' | 148' | 158' | $168{ }^{\prime}$ | 177' | 186' | 194' | 202' | 1 |
| 2 | - | $29^{\prime}$ | $52^{\prime}$ | $71^{\prime}$ | 89' | $97^{\prime}$ | 105' | 112' | 119 | $125 '$ | 131' | $137{ }^{\prime}$ | 143' | 2 |
| 3 | - | - | 29 | $45^{\prime}$ | $58^{\prime}$ | $71{ }^{\prime}$ | 83' | $91^{\prime}$ | 97 | 102' | 107' | 112' | $117{ }^{\prime}$ | 3 |
| 4 | - | - | - | $29^{\prime}$ | $42^{\prime}$ | $52^{\prime}$ | $61^{\prime}$ | $71^{\prime}$ | $80^{\prime}$ | $89^{\prime}$ | $93 '$ | 971 | 101' | 4 |
| 5 | - | - | - | - | $29^{\prime}$ | $40^{\prime}$ | $48^{\prime}$ | 56 | $63^{\prime}$ | 71' | $78^{\prime}$ | $87^{\prime}$ | $90^{\prime}$ | 5 |
| 6 | - | - | - | - | - | $29^{\prime}$ | $38^{\prime}$ | $45^{\prime}$ | $52^{\prime}$ | $58^{\prime}$ | 65 | $71{ }^{\prime}$ | 77 | 6 |
| 7 | - | - | - | - | - | - | $29 '$ | 37 | $43 '$ | 49' | $55 '$ | $60^{\prime}$ | $66^{\prime}$ | 7 |
| 8 | - | - | - | - | - | - | - | 29 | $36^{\prime}$ | 42' | $47^{\prime}$ | $52^{\prime}$ | 57 | 8 |
| 9 | - | - | - | - | - | - | - | - | $29^{\prime}$ | 36' | $41^{\prime}$ | $45{ }^{\prime}$ | $50 '$ | 9 |
| 10 | - | - | - | - | - | - | - | - | - | $29^{\prime}$ | 35' | $40^{\prime}$ | $44^{\prime}$ | 10 |
| 11 | - | - | - | - | - | - | - | - | - | - | $29^{\prime}$ | 35' | $39^{\prime}$ | 11 |
| 12 | - | - | - | - | - | - | - | - | - | - | - | 29' | $34^{\prime}$ | 12 |
| 13 | - | - | - | - | - | - | - | - | - | - | - | - | $29^{\prime}$ | 13 |
| Hits | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | Hits |
| Hits | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | Hits |
| 1 | $210{ }^{\prime}$ | 217 | 224 | 231' | $238{ }^{\prime}$ | $244{ }^{\prime}$ | $250 '$ | 257' | 263' | 269' | 274' | $280{ }^{\prime}$ | $286{ }^{\prime}$ | 1 |
| 2 | 148' | 153' | 158' | 163' | $168{ }^{\prime}$ | $173{ }^{\prime}$ | $177{ }^{\prime}$ | 181' | 186 | 190' | 194' | 198' | 202' | 2 |
| 3 | $121^{\prime}$ | 125' | 129' | 133' | 137' | $141^{\prime}$ | 145' | $148^{\prime}$ | 152' | 155' | $158{ }^{\prime}$ | $162^{\prime}$ | 165' | 3 |
| 4 | 105' | 108' | 112' | 115' | 119' | $122{ }^{\prime}$ | 125' | $128^{\prime}$ | 131' | 134' | 137' | 140 ' | 143' | 4 |
| 5 | $94^{\prime}$ | 97 | $100{ }^{\prime}$ | 103' | 106' | 109 | 112' | 115' | $117{ }^{\prime}$ | $120 '$ | 123' | 125' | $128^{\prime}$ | 5 |
| 6 | 83' | 89' | $91^{\prime}$ | $94^{\prime}$ | 97 | 100 | 102' | 105' | $107{ }^{\prime}$ | $110{ }^{\prime}$ | 112' | $114{ }^{\prime}$ | $117{ }^{\prime}$ | 6 |
| 7 | $71^{\prime}$ | 76 | 82' | 87 | $90^{\prime}$ | 92' | $95 '$ | 97 | $99^{\prime}$ | 102' | 104' | 106 | $108^{\prime}$ | 7 |
| 8 | $61^{\prime}$ | $66^{\prime}$ | $71^{\prime}$ | $76{ }^{\prime}$ | $80^{\prime}$ | $86^{\prime}$ | 89' | $91^{\prime}$ | $93 '$ | 95' | 97 | 99 | 101' | 8 |
| 9 | $54^{\prime}$ | $58^{\prime}$ | $63^{\prime}$ | $67^{\prime}$ | $71^{\prime}$ | $75 '$ | 79 | 83 | 88' | $90^{\prime}$ | $91^{\prime}$ | $93 '$ | $95^{\prime}$ | 9 |
| 10 | $48^{\prime}$ | $52^{\prime}$ | $56^{\prime}$ | $60^{\prime}$ | 63 ' | $67^{\prime}$ | 71 ' | $75 '$ | $78^{\prime}$ | 82' | 87 | 89' | $90^{\prime}$ | 10 |
| 11 | $43^{\prime}$ | 46 | $50^{\prime}$ | $54^{\prime}$ | 57 | $61^{\prime}$ | $64^{\prime}$ | $67^{\prime}$ | $71^{\prime}$ | 74 | $78^{\prime}$ | $81^{\prime}$ | 85' | 11 |
| 12 | $38^{\prime}$ | $42^{\prime}$ | $45^{\prime}$ | $48^{\prime}$ | $52^{\prime}$ | $55 '$ | $58^{\prime}$ | $61^{\prime}$ | $65^{\prime}$ | $68^{\prime}$ | $71^{\prime}$ | $74^{\prime}$ | $77^{\prime}$ | 12 |
| 13 | $34^{\prime}$ | $38^{\prime}$ | 41' | $44^{\prime}$ | $47^{\prime}$ | $50^{\prime}$ | $53^{\prime}$ | $56^{\prime}$ | 59' | $62^{\prime}$ | $65^{\prime}$ | $68^{\prime}$ | $71^{\prime}$ | 13 |
| 14 | 29 | 34 | 37 | $40^{\prime}$ | $43^{\prime}$ | 46 | $49^{\prime}$ | $52^{\prime}$ | $55 '$ | $57^{\prime}$ | $60^{\prime}$ | $63^{\prime}$ | $66^{\prime}$ | 14 |
| 15 | - | $29^{\prime}$ | $33 '$ | $37^{\prime}$ | $40^{\prime}$ | 42' | 45 | $48^{\prime}$ | $50^{\prime}$ | $53 '$ | 56 | $58^{\prime}$ | $61^{\prime}$ | 15 |
| 16 | - | - | $29^{\prime}$ | $33^{\prime}$ | $36^{\prime}$ | 39' | $42^{\prime}$ | $44^{\prime}$ | $47^{\prime}$ | 49' | $52^{\prime}$ | $54 '$ | 57 | 16 |
| 17 | - | - | - | $29^{\prime}$ | $33^{\prime}$ | $36^{\prime}$ | 39' | $41^{\prime}$ | $44^{\prime}$ | 46 | $48^{\prime}$ | $51^{\prime}$ | $53^{\prime}$ | 17 |
| 18 | - | - | - | - | $29^{\prime}$ | $33 '$ | $36^{\prime}$ | $38^{\prime}$ | 41' | $43^{\prime}$ | 45 | $47^{\prime}$ | $50^{\prime}$ | 18 |
| 19 | - | - | - | - | - | $29^{\prime}$ | $33^{\prime}$ | 35 | 38' | $40^{\prime}$ | 42' | 44 | $47^{\prime}$ | 19 |
| 20 | - | - | - | - | - | - | $29^{\prime}$ | 32' | 35' | 37 | $40^{\prime}$ | $42^{\prime}$ | $44^{\prime}$ | 20 |
| 21 | - | - | - | - | - | - | - | $29^{\prime}$ | 32' | 35' | 37 | $39^{\prime}$ | $41^{\prime}$ | 21 |
| 22 | - | - | - | - | - | - | - | - | $29^{\prime}$ | 32' | 35' | 371 | 39' | 22 |
| 23 | - | - | - | - | - | - | - | - | - | $29^{\prime}$ | $32^{\prime}$ | $34 '$ | 36 | 23 |
| 24 | - | - | - | - | - | - | - | - | - | - | 29 | $32 '$ | $34^{\prime}$ | 24 |
| 25 | - | - | - | - | - | - | - | - | - | - | - | $29^{\prime}$ | $32^{\prime}$ | 25 |
| 26 | - | - | - | - | - | - | - | - | - | - | - | - | $29^{\prime}$ | 26 |
| Hits | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | Hits |

Columns are number of projectiles in cluster. Read down to the lowest distance equal to or greater than the actual range and read across to find number of hits. Ranges listed are the maximum range at which the number of hits for that row would occur.

## Cluster Shot: Tight Choke

| Hits | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | Hits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 36 | $89^{\prime}$ | 121' | 140' | 157' | 171' | 185' | 198' | $210 '$ | 221' | 232' | 242 | $252{ }^{\prime}$ | 1 |
| 2 | - | 36 | $65^{\prime}$ | $89^{\prime}$ | 111' | $121^{\prime}$ | 131' | $140{ }^{\prime}$ | 148' | $157{ }^{\prime}$ | 164' | $171{ }^{\prime}$ | $178{ }^{\prime}$ | 2 |
| 3 | - | - | 36 | $56^{\prime}$ | 73 | 89' | 104' | 114' | $121^{\prime}$ | $128^{\prime}$ | 134' | $140{ }^{\prime}$ | $146{ }^{\prime}$ | 3 |
| 4 | - | - | - | 36 | $52^{\prime}$ | $65^{\prime}$ | $77^{\prime}$ | $89^{\prime}$ | $100{ }^{\prime}$ | 111' | 116' | $121{ }^{\prime}$ | $126{ }^{\prime}$ | 4 |
| 5 | - | - | - | - | 36 | 49' | $60^{\prime}$ | $70^{\prime}$ | $79^{\prime}$ | 89' | $98^{\prime}$ | $108{ }^{\prime}$ | 113' | 5 |
| 6 | - | - | - | - | - | 36 | $48^{\prime}$ | 56 | 65 | $73 '$ | 81' | 89' | 96 | 6 |
| 7 | - | - | - | - | - | - | 36 | $46^{\prime}$ | $54^{\prime}$ | $61^{\prime}$ | $68^{\prime}$ | $75 '$ | $82^{\prime}$ | 7 |
| 8 | - | - | - | - | - | - | - | 36 | 45 | $52^{\prime}$ | $59^{\prime}$ | $65^{\prime}$ | 71 | 8 |
| 9 | - | - | - | - | - | - | - | - | 36' | $44^{\prime}$ | $51^{\prime}$ | $56^{\prime}$ | $62^{\prime}$ | 9 |
| 10 | - | - | - | - | - | - | - | - | - | 36' | $44^{\prime}$ | $49^{\prime}$ | 55 | 10 |
| 11 | - | - | - | - | - | - | - | - | - | - | 36 | 43 ' | $48^{\prime}$ | 11 |
| 12 | - | - | - | - | - | - | - | - | - | - | - | 36' | $43^{\prime}$ | 12 |
| 13 | - | - | - | - | - | - | - | - | - | - | - | - | $36^{\prime}$ | 13 |
| Hits | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | Hits |
| Hits | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | Hits |
| 1 | 262' | 271' | $280{ }^{\prime}$ | 289' | 2971 | 305' | 313' | 321' | 328' | 336' | 343' | $350{ }^{\prime}$ | 357' | 1 |
| 2 | 185' | 192' | 198' | 204' | 210' | 216' | $221^{\prime}$ | $227{ }^{\prime}$ | 232' | $237{ }^{\prime}$ | $242{ }^{\prime}$ | $247{ }^{\prime}$ | $252 '$ | 2 |
| 3 | 151' | 157' | 162' | $167{ }^{\prime}$ | 171' | 176' | 181' | 185' | 190' | 194' | 198' | 202' | 206' | 3 |
| 4 | 131' | 136' | $140{ }^{\prime}$ | 144' | $148{ }^{\prime}$ | 153' | $157{ }^{\prime}$ | $160{ }^{\prime}$ | $164{ }^{\prime}$ | $168{ }^{\prime}$ | 171' | 175' | $178{ }^{\prime}$ | 4 |
| 5 | $117{ }^{\prime}$ | 121' | 125' | 129' | 133' | 136' | $140{ }^{\prime}$ | 143' | $147{ }^{\prime}$ | $150{ }^{\prime}$ | $153 '$ | $157{ }^{\prime}$ | $160{ }^{\prime}$ | 5 |
| 6 | 104' | 111' | 114' | $118{ }^{\prime}$ | 121' | $125{ }^{\prime}$ | $128^{\prime}$ | 131' | 134' | 137' | $140{ }^{\prime}$ | 143' | $146{ }^{\prime}$ | 6 |
| 7 | 89' | 95 | 102' | 109 | 112' | 115' | $118{ }^{\prime}$ | 121' | 124' | 127' | $130{ }^{\prime}$ | $132{ }^{\prime}$ | 135' | 7 |
| 8 | 77 | 83' | 89' | $94^{\prime}$ | $100 '$ | $108{ }^{\prime}$ | 111' | 113' | 116' | 119 | 121' | 124 | 126' | 8 |
| 9 | $67^{\prime}$ | $73^{\prime}$ | 78 | $83^{\prime}$ | $89^{\prime}$ | $94{ }^{\prime}$ | $99^{\prime}$ | 104' | 109' | 112' | 114' | $117{ }^{\prime}$ | 119' | 9 |
| 10 | $60^{\prime}$ | 65 | $70^{\prime}$ | $74^{\prime}$ | $79^{\prime}$ | 84' | 89' | $93 '$ | $98^{\prime}$ | 103' | $108^{\prime}$ | $111{ }^{\prime}$ | 113' | 10 |
| 11 | $53^{\prime}$ | $58^{\prime}$ | $62^{\prime}$ | 67 | $71^{\prime}$ | 76 | $80^{\prime}$ | 84' | $89^{\prime}$ | $93 '$ | 97 | $101{ }^{\prime}$ | $106{ }^{\prime}$ | 11 |
| 12 | $48^{\prime}$ | $52^{\prime}$ | $56^{\prime}$ | $61^{\prime}$ | 65 | $69^{\prime}$ | $73^{\prime}$ | 77 | $81^{\prime}$ | 85' | $89^{\prime}$ | $93 '$ | $96^{\prime}$ | 12 |
| 13 | $42^{\prime}$ | $47^{\prime}$ | $51^{\prime}$ | 55 | 59 | $63^{\prime}$ | 567' | $70^{\prime}$ | 74 | $78^{\prime}$ | $81^{\prime}$ | 85' | 89' | 13 |
| 14 | $36^{\prime}$ | 42' | $46^{\prime}$ | 50 | 54 | $58^{\prime}$ | $61^{\prime}$ | $65^{\prime}$ | 68' | $72^{\prime}$ | $75^{\prime}$ | $79^{\prime}$ | $82^{\prime}$ | 14 |
| 15 | - | 36' | $42^{\prime}$ | $46^{\prime}$ | $49^{\prime}$ | $53^{\prime}$ | 56 | $60^{\prime}$ | $63^{\prime}$ | $66^{\prime}$ | $70^{\prime}$ | $73^{\prime}$ | $76^{\prime}$ | 15 |
| 16 | - | - | 36 | $41^{\prime}$ | $45^{\prime}$ | 49' | $52^{\prime}$ | $55 '$ | $59^{\prime}$ | $62^{\prime}$ | $65^{\prime}$ | $68^{\prime}$ | 71 | 16 |
| 17 | - | - | - | 36 | $41^{\prime}$ | $45^{\prime}$ | 48' | $51^{\prime}$ | $54 '$ | $57^{\prime}$ | $60^{\prime}$ | $63 '$ | $66^{\prime}$ | 17 |
| 18 | - | - | - | - | 36 | $41^{\prime}$ | $44^{\prime}$ | 48' | $51^{\prime}$ | $54^{\prime}$ | 56 | $59^{\prime}$ | $62^{\prime}$ | 18 |
| 19 | - | - | - | - | - | 36' | $41^{\prime}$ | $44^{\prime}$ | 47' | $50^{\prime}$ | $53 '$ | $56^{\prime}$ | 58' | 19 |
| 20 | - | - | - | - | - | - | 36' | $41^{\prime}$ | $44^{\prime}$ | 47 | $49^{\prime}$ | $52^{\prime}$ | $55^{\prime}$ | 20 |
| 21 | - | - | - | - | - | - | - | $36^{\prime}$ | $40^{\prime}$ | $44^{\prime}$ | $46^{\prime}$ | $49^{\prime}$ | $52^{\prime}$ | 21 |
| 22 | - | - | - | - | - | - | - | - | $36^{\prime}$ | $40^{\prime}$ | $43^{\prime}$ | 46' | $48^{\prime}$ | 22 |
| 23 | - | - | - | - | - | - | - | - | - | 36' | $40^{\prime}$ | $43 '$ | $46^{\prime}$ | 23 |
| 24 | - | - | - | - | - | - | - | - | - | - | 36 | $40^{\prime}$ | $43^{\prime}$ | 24 |
| 25 | - | - | - | - | - | - | - | - | - | - | - | 36' | $40^{\prime}$ | 25 |
| 26 | - | - | - | - | - | - | - | - | - | - | - | - | $36^{\prime}$ | 26 |
| Hits | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | Hits |

For example, a cluster shot composed of 15 projectiles against a target 50 feet away would hit with 10 of them. The effective range is divided by the HP multiplier for the size of the creature being targeted. If a limb is hit then the effective range is tripled (quintupled in the case of minor limbs). For example, a 12pellet shotgun at 90 feet hitting an arm would get no pellets instead of four.

Cluster Shot: Open Choke

| Hits | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | Hits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $24^{\prime}$ | $59^{\prime}$ | 81' | $93 '$ | 104' | 114' | 123' | 132' | $140{ }^{\prime}$ | $148{ }^{\prime}$ | 155' | 162' | $168{ }^{\prime}$ | 1 |
| 2 | - | $24^{\prime}$ | $43 '$ | $59^{\prime}$ | 74 | 81' | $87^{\prime}$ | $93^{\prime}$ | $99^{\prime}$ | $104{ }^{\prime}$ | 109' | 114 | $119{ }^{\prime}$ | 2 |
| 3 | - | - | $24^{\prime}$ | $38^{\prime}$ | $81^{\prime}$ | $59^{\prime}$ | $70^{\prime}$ | $76^{\prime}$ | 81' | 85' | 89' | $93 '$ | 97 | 3 |
| 4 | - | - | - | $24^{\prime}$ | 35' | $43 '$ | $51^{\prime}$ | $59^{\prime}$ | $67^{\prime}$ | $74^{\prime}$ | 77 | $81^{\prime}$ | $84^{\prime}$ | 4 |
| 5 | - | - | - | - | $24^{\prime}$ | $33^{\prime}$ | $40^{\prime}$ | $46^{\prime}$ | $53 '$ | $59^{\prime}$ | $65^{\prime}$ | $72^{\prime}$ | 75 | 5 |
| 6 | - | - | - | - | - | $24^{\prime}$ | $32^{\prime}$ | $38^{\prime}$ | $43^{\prime}$ | 81' | $54^{\prime}$ | $59^{\prime}$ | $64^{\prime}$ | 6 |
| 7 | - | - | - | - | - | - | $24^{\prime}$ | $31^{\prime}$ | $36^{\prime}$ | $41^{\prime}$ | 45 | $50^{\prime}$ | $55^{\prime}$ | 7 |
| 8 | - | - | - | - | - | - | - | $24^{\prime}$ | $30^{\prime}$ | $35 '$ | $39^{\prime}$ | $43 '$ | $47^{\prime}$ | 8 |
| 9 | - | - | - | - | - | - | - | - | $24^{\prime}$ | $30^{\prime}$ | $34^{\prime}$ | 38' | $41^{\prime}$ | 9 |
| 10 | - | - | - | - | - | - | - | - | - | $24^{\prime}$ | 29 | $33 '$ | $36^{\prime}$ | 10 |
| 11 | - | - | - | - | - | - | - | - | - | - | 24 | $29^{\prime}$ | $32^{\prime}$ | 11 |
| 12 | - | - | - | - | - | - | - | - | - | - | - | $24^{\prime}$ | $29^{\prime}$ | 12 |
| 13 | - | - | - | - | - | - | - | - | - | - | - | - | $24^{\prime}$ | 13 |
| Hits | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | Hits |
| Hits | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | Hits |
| 1 | 175' | 181' | 187' | 192' | 198' | 203' | 209' | 214 | 219' | $224{ }^{\prime}$ | 229' | 233' | $238{ }^{\prime}$ | 1 |
| 2 | 123' | $128^{\prime}$ | 132' | 136' | $140{ }^{\prime}$ | 144' | $148^{\prime}$ | 151' | 155' | $158{ }^{\prime}$ | 162' | $165{ }^{\prime}$ | $168{ }^{\prime}$ | 2 |
| 3 | 101' | 104' | 108' | 111' | 114' | 117 | 121' | 123' | 126' | 129 | 132' | 135' | $137{ }^{\prime}$ | 3 |
| 4 | $87^{\prime}$ | $90^{\prime}$ | $93 '$ | $96^{\prime}$ | $99^{\prime}$ | 102' | 104' | 1071 | 109 | 112' | 114' | $117{ }^{\prime}$ | 119 | 4 |
| 5 | $78^{\prime}$ | 81' | $83^{\prime}$ | 86' | $89^{\prime}$ | $91^{\prime}$ | $93 '$ | $96^{\prime}$ | $98^{\prime}$ | $100{ }^{\prime}$ | 102' | 104' | 106 | 5 |
| 6 | $70^{\prime}$ | $74^{\prime}$ | 76 | $79^{\prime}$ | $81^{\prime}$ | $83 '$ | 85' | 87 | 89' | $91^{\prime}$ | $93 '$ | $94^{\prime}$ | 97 | 6 |
| 7 | $59^{\prime}$ | $64^{\prime}$ | $68^{\prime}$ | $73 '$ | 75 | $77^{\prime}$ | $79^{\prime}$ | $81^{\prime}$ | 83' | 85' | 86' | 88' | $90^{\prime}$ | 7 |
| 8 | 51' | $55^{\prime}$ | $59^{\prime}$ | $63^{\prime}$ | 67 | $72^{\prime}$ | $74^{\prime}$ | 76 | 77 | $79^{\prime}$ | $81^{\prime}$ | $83 '$ | 84' | 8 |
| 9 | $45^{\prime}$ | $81^{\prime}$ | $52^{\prime}$ | 56 | $59^{\prime}$ | $63^{\prime}$ | $66^{\prime}$ | $70^{\prime}$ | $73^{\prime}$ | 75 | 76 | $78^{\prime}$ | $79^{\prime}$ | 9 |
| 10 | $40^{\prime}$ | $43^{\prime}$ | 46 | $50^{\prime}$ | $53^{\prime}$ | $56^{\prime}$ | 59 | $62^{\prime}$ | $65^{\prime}$ | $68^{\prime}$ | $72^{\prime}$ | 74 | 75 | 10 |
| 11 | $36^{\prime}$ | $39^{\prime}$ | 42' | $45^{\prime}$ | $48^{\prime}$ | $50^{\prime}$ | $53^{\prime}$ | $56^{\prime}$ | $59^{\prime}$ | $62^{\prime}$ | $65^{\prime}$ | $68^{\prime}$ | $70^{\prime}$ | 11 |
| 12 | $32^{\prime}$ | 35' | 38' | $40^{\prime}$ | $43^{\prime}$ | 46 | $81^{\prime}$ | $51^{\prime}$ | $54^{\prime}$ | $56^{\prime}$ | $59^{\prime}$ | $62^{\prime}$ | $64^{\prime}$ | 12 |
| 13 | $28^{\prime}$ | $31^{\prime}$ | $34^{\prime}$ | 37 | $39^{\prime}$ | 42' | $44^{\prime}$ | 47 | $49^{\prime}$ | $52^{\prime}$ | 54 | $57^{\prime}$ | $59^{\prime}$ | 13 |
| 14 | $24^{\prime}$ | $28^{\prime}$ | $31^{\prime}$ | $33^{\prime}$ | $36^{\prime}$ | $38^{\prime}$ | $41^{\prime}$ | $43^{\prime}$ | 45 | $48^{\prime}$ | $50^{\prime}$ | $52^{\prime}$ | $55^{\prime}$ | 14 |
| 15 | - | $24^{\prime}$ | $28^{\prime}$ | $31^{\prime}$ | $33^{\prime}$ | 35' | $38^{\prime}$ | $40^{\prime}$ | $42^{\prime}$ | $44^{\prime}$ | $46^{\prime}$ | 49' | $51^{\prime}$ | 15 |
| 16 | - | - | $24^{\prime}$ | $28^{\prime}$ | $30^{\prime}$ | $33 '$ | 35' | 37 | 39' | $41^{\prime}$ | $53^{\prime}$ | 45' | 47 | 16 |
| 17 | - | - | - | $24^{\prime}$ | 27 | $30^{\prime}$ | $32^{\prime}$ | $34^{\prime}$ | $36^{\prime}$ | $38^{\prime}$ | $40^{\prime}$ | 42' | $44^{\prime}$ | 17 |
| 18 | - | - | - | - | $24^{\prime}$ | 27 | $30^{\prime}$ | $32^{\prime}$ | $34^{\prime}$ | $36^{\prime}$ | $38^{\prime}$ | 39' | $41^{\prime}$ | 18 |
| 19 | - | - | - | - | - | $24^{\prime}$ | 27 | $29^{\prime}$ | 31' | $33^{\prime}$ | 35' | 37 | $39^{\prime}$ | 19 |
| 20 | - | - | - | - | - | - | $24^{\prime}$ | $27^{\prime}$ | $29^{\prime}$ | $31^{\prime}$ | 33' | $35^{\prime}$ | $36^{\prime}$ | 20 |
| 21 | - | - | - | - | - | - | - | $24^{\prime}$ | $27^{\prime}$ | $29^{\prime}$ | $31^{\prime}$ | $33^{\prime}$ | $34^{\prime}$ | 21 |
| 22 | - | - | - | - | - | - | - | - | $24^{\prime}$ | 27 | $29^{\prime}$ | 31' | 32' | 22 |
| 23 | - | - | - | - | - | - | - | - | - | $24^{\prime}$ | 27 | $29^{\prime}$ | $30^{\prime}$ | 23 |
| 24 | - | - | - | - | - | - | - | - | - | - | $24^{\prime}$ | $27^{\prime}$ | $29^{\prime}$ | 24 |
| 25 | - | - | - | - | - | - | - | - | - | - | - | $24^{\prime}$ | 27 | 25 |
| 26 | - | - | - | - | - | - | - | - | - | - | - | - | $24^{\prime}$ | 26 |
| Hits | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | Hits |


| Shots | 1/8 | 1/4 | $3 / 8$ | 1/2 | 5/8 | 3/4 | 7/8 | 1 | 11/8 | $11 / 4$ | $13 / 8$ | $11 / 2$ | $13 / 4$ | 2 | Shots |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 13,750' | 6,875' | 4,583' | 3,437' | 2,750' | 2,291' | 1,964' | 1,718' | 1,527 | 1,375' | 1,250' | ,145' | 982' | 859' | 2 |
| 3 | 4,583' | 2,291' | 1,527 | 1,145' | 916' | 763 ' | 654' | 572' | 509' | 458' | 416' | 381' | 327' | 286' | 3 |
| 4 | 2,291' | 1,145' | 763' | 572' | 458' | 381' | 327' | 286' | 254' | 229' | 208' | 190' | 163' | $143 '$ | 4 |
| 5 | 1,375' | $687{ }^{\prime}$ | 458' | 343' | 275' | 229 ' | 196' | $171{ }^{\prime}$ | 152' | 137' | $125{ }^{\prime}$ | 114' | $98^{\prime}$ | 85' | 5 |
| 6 | 916' | 458' | 305' | 229' | 183' | 152' | $130{ }^{\prime}$ | $114{ }^{\prime}$ | 101' | $91^{\prime}$ | 83' | 76 | 65 | 57 | 6 |
| 7 | $654 '$ | 327' | 218' | 163' | $130{ }^{\prime}$ | 109 | $93{ }^{\prime}$ | $81^{\prime}$ | $72^{\prime}$ | $65^{\prime}$ | $59^{\prime}$ | $54^{\prime}$ | 46' | $40^{\prime}$ | 7 |
| 8 | 491' | 245' | $163 '$ | 122' | $98^{\prime}$ | 81' | $70^{\prime}$ | $61^{\prime}$ | $54^{\prime}$ | $49^{\prime}$ | $44{ }^{\prime}$ | $40^{\prime}$ | 35' | $30^{\prime}$ | 8 |
| 9 | $381{ }^{\prime}$ | 190' | $127{ }^{\prime}$ | $95 '$ | $76^{\prime}$ | $63^{\prime}$ | 54 | $47^{\prime}$ | $42^{\prime}$ | $38^{\prime}$ | 34' | $31^{\prime}$ | 27 | $23 '$ | 9 |
| 10 | $305{ }^{\prime}$ | 152' | 101' | 76 | $61^{\prime}$ | $50^{\prime}$ | $43^{\prime}$ | $38^{\prime}$ | $33^{\prime}$ | $30^{\prime}$ | 27 | $25^{\prime}$ | 21' | 19' | 10 |
| 11 | $250{ }^{\prime}$ | 125' | 83 | $62^{\prime}$ | $50^{\prime}$ | $41^{\prime}$ | $35^{\prime}$ | $31^{\prime}$ | 27 | $25^{\prime}$ | 22' | $20^{\prime}$ | 17 | 15 | 11 |
| 12 | 208' | 104' | $69^{\prime}$ | $52^{\prime}$ | $41^{\prime}$ | $34^{\prime}$ | $29^{\prime}$ | $26^{\prime}$ | $23 '$ | $20^{\prime}$ | $18 '$ | $17^{\prime}$ | 14 | 13' | 12 |
| 13 | 176' | $88^{\prime}$ | $58^{\prime}$ | $44^{\prime}$ | $35^{\prime}$ | $29^{\prime}$ | $25^{\prime}$ | $22^{\prime}$ | $19^{\prime}$ | 17 | $16^{\prime}$ | 14 | 12' | $11^{\prime}$ | 13 |
| 14 | 151' | $75^{\prime}$ | $50^{\prime}$ | 37' | $30^{\prime}$ | $25^{\prime}$ | $21^{\prime}$ | $18^{\prime}$ | $16^{\prime}$ | $15 '$ | $13 '$ | $12^{\prime}$ | $10^{\prime}$ | $9{ }^{\prime}$ | 14 |
| 15 | 130' | $65^{\prime}$ | $43^{\prime}$ | $32^{\prime}$ | $26^{\prime}$ | $21^{\prime}$ | $18^{\prime}$ | $16^{\prime}$ | $14^{\prime}$ | $13 '$ | $11^{\prime}$ | $10^{\prime}$ | $9 '$ | $8{ }^{\prime}$ | 15 |
| 16 | 114' | $57^{\prime}$ | $38^{\prime}$ | $28^{\prime}$ | $22^{\prime}$ | $19^{\prime}$ | $16^{\prime}$ | $14^{\prime}$ | $12^{\prime}$ | $11^{\prime}$ | $10^{\prime}$ | $9^{\prime}$ | 8' | $7{ }^{\prime}$ | 16 |
| 17 | 101' | $50^{\prime}$ | $33^{\prime}$ | $25^{\prime}$ | $20^{\prime}$ | $16^{\prime}$ | $14^{\prime}$ | $12^{\prime}$ | 11' | $10^{\prime}$ | $9^{\prime}$ | 8' | 71 | $6{ }^{\prime}$ | 17 |
| 18 | $89^{\prime}$ | $44^{\prime}$ | $29^{\prime}$ | $22^{\prime}$ | $17^{\prime}$ | $14^{\prime}$ | $12^{\prime}$ | $11^{\prime}$ | $9 '$ | $8{ }^{\prime}$ | 8' | $7{ }^{\prime}$ | $6 '$ | $5 '$ | 18 |
| 19 | $80^{\prime}$ | $40^{\prime}$ | $26^{\prime}$ | $20^{\prime}$ | $16^{\prime}$ | $13 '$ | $11^{\prime}$ | $10^{\prime}$ | 8' | 8' | $7{ }^{\prime}$ | $6 '$ | 5 | $5 '$ | 19 |
| 20 | $72^{\prime}$ | $36^{\prime}$ | $24^{\prime}$ | $18^{\prime}$ | $14^{\prime}$ | $12^{\prime}$ | $10^{\prime}$ | $9 '$ | 8' | $7{ }^{\prime}$ | $6 '$ | $6^{\prime}$ | $5 '$ | $4 '$ | 20 |
| 21 | $65^{\prime}$ | $32^{\prime}$ | $21^{\prime}$ | $16^{\prime}$ | $13 '$ | $10^{\prime}$ | $9 '$ | $8{ }^{\prime}$ | $7{ }^{\prime}$ | $6 '$ | $5 '$ | $5 '$ | $4 '$ | $4 '$ | 21 |
| 22 | $59^{\prime}$ | $29^{\prime}$ | $19^{\prime}$ | $14^{\prime}$ | $11^{\prime}$ | $9 '$ | $8{ }^{\prime}$ | $7{ }^{\prime}$ | $6 '$ | $5 '$ | $5 '$ | $4 '$ | $4 '$ | $3 '$ | 22 |
| 23 | $54^{\prime}$ | 27 | $18^{\prime}$ | $13 '$ | $10^{\prime}$ | $9{ }^{\prime}$ | $7{ }^{\prime}$ | $6{ }^{\prime}$ | $6{ }^{\prime}$ | $5 '$ | 4' | $4 '$ | $3 '$ | $3 '$ | 23 |
| 24 | $49^{\prime}$ | $24^{\prime}$ | $16^{\prime}$ | $12^{\prime}$ | $9{ }^{\prime}$ | $8^{\prime}$ | 71 | $6 '$ | $5 '$ | $4 '$ | $4 '$ | $4 '$ | $3 '$ | $3 '$ | 24 |
| 25 | 45 | $22^{\prime}$ | $15 '$ | $11^{\prime}$ | $9 '$ | $7{ }^{\prime}$ | $6{ }^{\prime}$ | $5 '$ | $5^{\prime}$ | $4^{\prime}$ | $4 '$ | 3' | $3 '$ | $2 '$ | 25 |
| 26 | $42^{\prime}$ | $21^{\prime}$ | $14^{\prime}$ | $10^{\prime}$ | $8{ }^{\prime}$ | $7{ }^{\prime}$ | $6 '$ | $5 '$ | $4 '$ | $4 '$ | $3 '$ | $3^{\prime}$ | $3 '$ | $2 '$ | 26 |
| 27 | 39' | $19^{\prime}$ | $13 '$ | $9 '$ | $7{ }^{\prime}$ | $6{ }^{\prime}$ | $5 '$ | $4 '$ | $4 '$ | $3 '$ | $3 '$ | $3 '$ | $2 '$ | $2 '$ | 27 |
| 28 | $36^{\prime}$ | $18^{\prime}$ | $12^{\prime}$ | $9 '$ | $7{ }^{\prime}$ | $6{ }^{\prime}$ | $5 '$ | $4 '$ | $4 '$ | $3 '$ | $3 '$ | $3 '$ | $2 '$ | $2 '$ | 28 |
| 29 | $33^{\prime}$ | $16^{\prime}$ | $11^{\prime}$ | $8{ }^{\prime}$ | $6{ }^{\prime}$ | 5' | $4 '$ | $4 '$ | $3 '$ | $3 '$ | $3 '$ | $2^{\prime}$ | $2 '$ | $2^{\prime}$ | 29 |
| 30 | $31^{\prime}$ | $15^{\prime}$ | $10^{\prime}$ | $7{ }^{\prime}$ | $6{ }^{\prime}$ | 5' | $4{ }^{\prime}$ | $3 '$ | $3^{\prime}$ | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1 '$ | 30 |
| 31 | $29^{\prime}$ | $14^{\prime}$ | $9 '$ | $7{ }^{\prime}$ | $5 '$ | $4 '$ | $4 '$ | $3 '$ | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1 '$ | 31 |
| 32 | 27 | $13 '$ | $9{ }^{\prime}$ | $6{ }^{\prime}$ | 5' | $4^{\prime}$ | $3^{\prime}$ | 3' | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1{ }^{\prime}$ | 32 |
| 33 | $26^{\prime}$ | $13 '$ | 8' | $6 '$ | 5' | $4 '$ | $3 '$ | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $2 '$ | $2^{\prime}$ | $1 '$ | $1 '$ | 33 |
| 34 | $24^{\prime}$ | $12^{\prime}$ | 8' | $6{ }^{\prime}$ | $4 '$ | $4 '$ | $3^{\prime}$ | 3' | $2^{\prime}$ | $2 '$ | $2 '$ | $2^{\prime}$ | $1 '$ | $1 '$ | 34 |
| 35 | $23^{\prime}$ | $11^{\prime}$ | $7{ }^{\prime}$ | $5 '$ | $4 '$ | 3' | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | 35 |
| 36 | $21^{\prime}$ | $10^{\prime}$ | $7{ }^{\prime}$ | 5' | $4 '$ | $3^{\prime}$ | $3 '$ | $2^{\prime}$ | $2 '$ | $2 '$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1{ }^{\prime}$ | 36 |
| 37 | $20^{\prime}$ | $10^{\prime}$ | $6 '$ | 5' | $4 '$ | 3' | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | 37 |
| 38 | $19^{\prime}$ | $9 '$ | 6 | $4^{\prime}$ | $3^{\prime}$ | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | $1 '$ | $1 '$ | 38 |
| 39 | $18^{\prime}$ | $9{ }^{\prime}$ | $6 '$ | $4 '$ | 3' | 3' | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | 39 |
| 40 | $17^{\prime}$ | $8{ }^{\prime}$ | $5 '$ | $4 '$ | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | 40 |
| 41 | $16^{\prime}$ | $8^{\prime}$ | $5 '$ | $4 '$ | 3' | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1 '$ | $1 '$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | 41 |
| 44 | $14^{\prime}$ | $7{ }^{\prime}$ | $4 '$ | 3' | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | $1 '$ | - | 44 |
| 48 | $12^{\prime}$ | $6{ }^{\prime}$ | $4 '$ | 3' | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | - | - | 48 |
| 50 | $11^{\prime}$ | 5' | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | - | - | - | 50 |
| 52 | $10^{\prime}$ | $5^{\prime}$ | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | - | - | - | - | 52 |
| 55 | $9 '$ | $4 '$ | $3 '$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | - | - | - | - | - | 55 |
| Shots | 1/8 | 1/4 | $3 / 8$ | 1/2 | 5/8 | 3/4 | 7/8 | 1 | $11 / 8$ | $11 / 4$ | $13 / 8$ | 11/2 | $13 / 4$ | 2 | Shots |


| Shots | 21/8 | $21 / 4$ | $23 / 8$ | $21 / 2$ | $23 / 4$ | 3 | $31 / 4$ | $31 / 2$ | $33 / 4$ | 4 | $4^{1 / 4}$ | 41/2 | 43/4 | 5 |  |  |  | Shots |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 808' | 763' | 723' | 687 | 625' | 572' | 528' | 491' | 458' | 429' | 404' | 381' | 361' | 343' | 327 |  |  | 2 |
| 3 | 269' | 254' | 241' | 229' | 208' | 190' | 176 | 163 | 152' | 143' | 134' | 127' | $120 '$ | 114' | 109' | 104' | 99' | 3 |
| 4 | 134' | 127' | 120 | 114' | 104' | 95 | 88' | 81' | $76^{\prime}$ | $71^{\prime}$ | 67 | $63 '$ | $60^{\prime}$ | 57 | 54 | 52' | 49' | 4 |
| 5 | $80^{\prime}$ | 76 | $72^{\prime}$ | 68' | $62^{\prime}$ | 57 | $52^{\prime}$ | 49' | 45' | 42' | $40^{\prime}$ | $38^{\prime}$ | 36' | 34 | 32' | 31' | 29 | 5 |
| 6 | $53^{\prime}$ | $50^{\prime}$ | 48' | 45' | 41' | $38^{\prime}$ | $35 '$ | 32' | $30^{\prime}$ | $28^{\prime}$ | $26^{\prime}$ | 25 | $24^{\prime}$ | $22^{\prime}$ | 21' | 20' | 19 | 6 |
| 7 | $38^{\prime}$ | $36^{\prime}$ | 34 | 32' | 29 | 27 | $25^{\prime}$ | $23 '$ | $21^{\prime}$ | $20^{\prime}$ | $19^{\prime}$ | 18' | $17{ }^{\prime}$ | $16^{\prime}$ | 15 | 14 | $14^{\prime}$ | 7 |
| 8 | $28^{\prime}$ | 27 | 25 | $24^{\prime}$ | $22^{\prime}$ | $20^{\prime}$ | $18^{\prime}$ | 17 | $16^{\prime}$ | 15 | $14^{\prime}$ | $13 '$ | $12^{\prime}$ | $12^{\prime}$ | 11' | 11 ' | $10^{\prime}$ | 8 |
| 9 | $22^{\prime}$ | $21^{\prime}$ | $20^{\prime}$ | 19' | 17 | 15 | $14^{\prime}$ | $13 '$ | $12^{\prime}$ | 11' | $11^{\prime}$ | $10^{\prime}$ | $10^{\prime}$ | $9^{\prime}$ | $9 '$ | $8{ }^{\prime}$ | $8{ }^{\prime}$ | 9 |
| 10 | $17{ }^{\prime}$ | 16 | $16^{\prime}$ | $15 '$ | $13 '$ | 12' | $11^{\prime}$ | $10^{\prime}$ | $10^{\prime}$ | $9 '$ | $8{ }^{\prime}$ | $8{ }^{\prime}$ | $8^{\prime}$ | $7{ }^{\prime}$ | $7{ }^{\prime}$ | $6 '$ | $6 '$ | 10 |
| 11 | 14 | $13 '$ | $13 '$ | 12' | $11^{\prime}$ | $10^{\prime}$ | $9 '$ | $8{ }^{\prime}$ | $8^{\prime}$ | 7 | $7{ }^{\prime}$ | 6 | $6{ }^{\prime}$ | $6 '$ | $5 '$ | $5 '$ | $5 '$ | 11 |
| 12 | $12^{\prime}$ | $11^{\prime}$ | $10^{\prime}$ | $10^{\prime}$ | $9 '$ | 8' | $8{ }^{\prime}$ | $7{ }^{\prime}$ | $6{ }^{\prime}$ | $6 '$ | $6 '$ | $5 '$ | $5 '$ | $5 '$ | $4 '$ | $4 '$ | $4 '$ | 12 |
| 13 | $10^{\prime}$ | $9{ }^{\prime}$ | $9 '$ | 8' | $8^{\prime}$ | $7{ }^{\prime}$ | $6{ }^{\prime}$ | $6 '$ | $5 '$ | $5 '$ | $5 '$ | $4 '$ | $4 '$ | $4 '$ | $4 '$ | $4 '$ | $3 '$ | 13 |
| 14 | $8{ }^{\prime}$ | 8' | 71 | 7 | $6 '$ | $6^{\prime}$ | $5^{\prime}$ | 5 | $5 '$ | $4 '$ | $4^{\prime}$ | $4 '$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | 14 |
| 15 | $7{ }^{\prime}$ | $7{ }^{\prime}$ | $6 '$ | $6 '$ | $5 '$ | $5 '$ | 5' | $4 '$ | $4 '$ | $4 '$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $2 '$ | $2^{\prime}$ | 15 |
| 16 | 6 | $6{ }^{\prime}$ | $6 '$ | $5 '$ | $5 '$ | $4 '$ | $4 '$ | $4 '$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $2 '$ | $2 '$ | $2 '$ | $2 '$ | 16 |
| 17 | $5 '$ | $5 '$ | $5 '$ | $5 '$ | $4 '$ | $4 '$ | 3' | $3 '$ | $3 '$ | $3 '$ | $2 '$ | $2 '$ | $2^{\prime}$ | $2 '$ | $2 '$ | $2 '$ | $2^{\prime}$ | 17 |
| 18 | $5 '$ | $4^{\prime}$ | $4 '$ | $4 '$ | $4 '$ | $3 '$ | $3 '$ | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2 '$ | $2^{\prime}$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | 18 |
| 19 | $4 '$ | $4 '$ | $4 '$ | $4 '$ | $3 '$ | $3 '$ | $3 '$ | $2^{\prime}$ | $2 '$ | $2^{\prime}$ | $2 '$ | $2 '$ | $2^{\prime}$ | $2 '$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | 19 |
| 20 | $4 '$ | $4 '$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | $1 '$ | 20 |
| 21 | $3 '$ | 3' | $3 '$ | $3 '$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | 21 |
| 22 | $3 '$ | $3 '$ | $3 '$ | $2 '$ | $2^{\prime}$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1^{\prime}$ | $1 '$ | 22 |
| 23 | $3 '$ | $3 '$ | $2^{\prime}$ | $2 '$ | $2 '$ | $2 '$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1{ }^{\prime}$ | $1 '$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | 23 |
| 24 | $2 '$ | $2^{\prime}$ | $2 '$ | $2 '$ | $2 '$ | $2 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | 24 |
| 25 | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $2 '$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | - | 25 |
| 26 | $2 '$ | $2^{\prime}$ | $2 '$ | $2 '$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | - | - | 26 |
| 27 | $2{ }^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1 '$ | $1{ }^{\prime}$ | $1^{\prime}$ | $1 '$ | $1 '$ | $1^{\prime}$ | $1{ }^{\prime}$ | $1{ }^{\prime}$ | $1 '$ | $1 '$ | - | - | - | - | 27 |
| 28 | $2 '$ | $2^{\prime}$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | - | - | - | - | - | 28 |
| 29 | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | $1^{\prime}$ | - | - | - | - | - | - | - | 29 |
| 30 | $1 '$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | - | - | - | - | - | - | - | - | 30 |
| 31 | $1 '$ | $1^{\prime}$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | - | - | - | - | - | - | - | - | - | 31 |
| 33 | $1 '$ | $1^{\prime}$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1^{\prime}$ | - | - | - | - | - | - | - | - | - | - | 33 |
| 34 | $1 '$ | $1 '$ | $1^{\prime}$ | $1 '$ | $1 '$ | $1^{\prime}$ | - | - | - | - | - | - | - | - | - | - | - | 34 |
| 35 | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | - | - | - | - | - | - | - | - | - | - | - | - | 35 |
| 37 | $1 '$ | $1^{\prime}$ | $1 '$ | $1 '$ | - | - | - | - | - | - | - | - | - | - | - | - | - | 37 |
| 38 | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 38 |
| 39 | $1 '$ | $1^{\prime}$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 39 |
| 40 | $1^{\prime}$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |  | 40 |
| Shots | $21 / 8$ | 21/4 | $23 / 8$ | $2^{1 / 2}$ | $23 / 4$ | 3 | 31/4 | $3^{1 / 2}$ | $33 / 4$ | 4 | 41/4 | 41/2 | $43 / 4$ | 5 | $51 / 4$ | $5^{1 / 2}$ |  | Shots |

Find the column corresponding to the Control
Rating and read down to the lowest distance that is equal to or greater than the range adjusted for target size. Triple the effective range for limb shots and quintuple it for minor limb shots. Read across to find the maximum number of shots that can hit at that range.

If the Control Rating is less than 17 it should be rounded to the nearest column, but for Control Ratings greater than 17 always round to the higher column. For example, a Control Rating 18 uses the 19 column.

| Shots |  | 61/4 | 61/2 | 63/4 | 7 | 71/4 | 71/2 | $73 / 4$ | 8 | $8^{1 / 4}$ | $81 / 2$ | $83 / 4$ | 9 | 91/4 | 91/2 | 93/4 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | Shots |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 286' | 275' | 264' | 254' | 245' | 237 | 229' | 221' | 214 | 208' | 202' | 196' | 190' | 185' | 180' | 176' | 171' | 156' | 143' | 132' | 122' | 114' | 107 | 101' | 2 |
| 3 | 95 | 91' | 88' | 84' | 81' | $79^{\prime}$ | 76 | 73 | 71' | $69^{\prime}$ | 67' | $65^{\prime}$ | 631 | 61' | $60^{\prime}$ | $58^{\prime}$ | 57 | $52^{\prime}$ | 47' | 44' | 40' | 38' | 35' | 33' | 3 |
| 4 | 47 | 45' | $44^{\prime}$ | 42' | 40' | 39' | $38^{\prime}$ | 36' | $35 '$ | 34 | $33^{\prime}$ | $32^{\prime}$ | $31^{\prime}$ | $30^{\prime}$ | $30^{\prime}$ | 29 | $28^{\prime}$ | $26^{\prime}$ | $23 '$ | $22^{\prime}$ | $20^{\prime}$ | 19 | 17 | 16 | 4 |
| 5 | $28^{\prime}$ | 27 | 26 | 25 | 24 | $23 '$ | 22 | $22^{\prime}$ | $21^{\prime}$ | $20^{\prime}$ | $20^{\prime}$ | 19 | 19' | 18' | 18' | 17 | 17' | 15' | 14 | $13 '$ | 12 | 11' | $10^{\prime}$ | $10^{\prime}$ | 5 |
| 6 | 19 | 18' | 17 | 16' | $16^{\prime}$ | 15' | 15' | 14 | 14 | 13' | $13 '$ | $13 '$ | $12^{\prime}$ | $12^{\prime}$ | $12^{\prime}$ | $11{ }^{\prime}$ | $11^{\prime}$ | $10^{\prime}$ | $9{ }^{\prime}$ | $8^{\prime}$ | $8^{\prime}$ | $7{ }^{\prime}$ | $7{ }^{\prime}$ | $6^{\prime}$ | 6 |
| 7 | $13 '$ | $13 '$ | 12 | 12 | $11^{\prime}$ | 11' | $10^{\prime}$ | $10^{\prime}$ | $10^{\prime}$ | $9 '$ | $9{ }^{\prime}$ | $9{ }^{\prime}$ | $9 '$ | $8^{\prime}$ | $8^{\prime}$ | $8{ }^{\prime}$ | $8^{\prime}$ | $7{ }^{\prime}$ | $6 '$ | $6{ }^{\prime}$ | $5^{\prime}$ | $5 '$ | 5' | $4 '$ | 7 |
| 8 | $10^{\prime}$ | $9 '$ | $9 '$ | $9 '$ | $8{ }^{\prime}$ | $8{ }^{\prime}$ | $8{ }^{\prime}$ | $7{ }^{\prime}$ | $7{ }^{\prime}$ | $7{ }^{\prime}$ | $7{ }^{\prime}$ | 71 | $6 '$ | $6^{\prime}$ | $6^{\prime}$ | $6{ }^{\prime}$ | $6{ }^{\prime}$ | $5 '$ | $5 '$ | $4 '$ | $4^{\prime}$ | $4 '$ | $3 '$ | $3 '$ | 8 |
| 9 | $7{ }^{\prime}$ | $7{ }^{\prime}$ | $7{ }^{\prime}$ | $7{ }^{\prime}$ | $6 '$ | $6 '$ | $6 '$ | $6{ }^{\prime}$ | $5 '$ | $5 '$ | $5 '$ | 5' | $5 '$ | $5 '$ | $5 '$ | $4 '$ | $4 '$ | $4 '$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $2^{\prime}$ | $2 '$ | 9 |
| 10 | $6{ }^{\prime}$ | $6 '$ | $5 '$ | $5 '$ | $5 '$ | $5 '$ | $5 '$ | $4 '$ | $4^{\prime}$ | $4^{\prime}$ | $4 '$ | $4 '$ | 4' | $4^{\prime}$ | $4^{\prime}$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | 10 |
| 11 | $5 '$ | $5 '$ | $4 '$ | $4 '$ | $4 '$ | $4 '$ | $4^{\prime}$ | $4 '$ | $3 '$ | 3' | $3 '$ | 3' | $3 '$ | 3' | $3 '$ | $3 '$ | $3 '$ | $2 '$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | 11 |
| 12 | $4 '$ | $4 '$ | 4' | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | 3' | $3 '$ | $2^{\prime}$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | $1 '$ | 12 |
| 13 | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2 '$ | $2^{\prime}$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1{ }^{\prime}$ | $1{ }^{\prime}$ | 13 |
| 14 | $3 '$ | $3 '$ | $2^{\prime}$ | $2 '$ | $2 '$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1{ }^{\prime}$ | $1 '$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | 14 |
| 15 | $2 '$ | $2 '$ | $2 '$ | $2 '$ | $2 '$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1{ }^{\prime}$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1{ }^{\prime}$ | $1 '$ | $1 '$ | $1^{\prime}$ | $1^{\prime}$ | - | 15 |
| 16 | $2 '$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $2 '$ | $1 '$ | $1{ }^{\prime}$ | $1 '$ | $1 '$ | $1^{\prime}$ | $1{ }^{\prime}$ | $1^{\prime}$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1{ }^{\prime}$ | $1 '$ | $1^{\prime}$ | - | - | - | 16 |
| 17 | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | - | - | - | - | - | 17 |
| 18 | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | $1 '$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1{ }^{\prime}$ | $1^{\prime}$ | $1 '$ | - | - | - | - | - | - | 18 |
| 19 | $1 '$ | $1 '$ | $1{ }^{\prime}$ | $1 '$ | $1{ }^{\prime}$ | $1 '$ | $1{ }^{\prime}$ | $1 '$ | $1 '$ | $1^{\prime}$ | $1{ }^{\prime}$ | $1^{\prime}$ | $1{ }^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1{ }^{\prime}$ | $1 '$ | - | - | - | - | - | - | - | 19 |
| 20 | $1^{\prime}$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1{ }^{\prime}$ | $1 '$ | $1 '$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | $1 '$ | - | - | - | - | - | - | - | - | - | - | - | 20 |
| 21 | $1^{\prime}$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1^{\prime}$ | $1 '$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 21 |
| 22 | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | $1 '$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 22 |
| 23 | $1 '$ | $1 '$ | $1 '$ | $1 '$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 23 |
| 24 | $1^{\prime}$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 24 |
| Shots | 6 | $61 / 4$ | $61 / 2$ | $63 / 4$ | 7 | 71/4 | $71 / 2$ | $73 / 4$ | 8 | 81/4 | $81 / 2$ | $83 / 4$ | 9 | 91/4 | $9^{1 / 2}$ | $93 / 4$ | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | Shots |


| Shots | 19 | 21 | 24 | 28 | 31 | 35 | 40 | 47 | 57 | 63 | 71 | 81 | 95 | 114 | 143 | 171 | 190 | 214 | 245 | 286 | 343 | 429 | 572 | 859 | Shots |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | $90^{\prime}$ | 81' | 71' | 61' | 55' | 49' | 42' | 36' | $30^{\prime}$ | 27 | 24 | 21' | 18' | 15 | $12^{\prime}$ | $10^{\prime}$ | $9{ }^{\prime}$ | $8^{\prime}$ | $7{ }^{\prime}$ | $6{ }^{\prime}$ | $5 '$ | $4 '$ | 3' | $2 '$ | 2 |
| 3 | $30^{\prime}$ | 27 | 23' | $20^{\prime}$ | 18' | 16 | 14' | 12' | $10^{\prime}$ | $9 '$ | $8^{\prime}$ | $7{ }^{\prime}$ | $6{ }^{\prime}$ | $5 '$ | $4^{\prime}$ | $3 '$ | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1 '$ | $1 '$ | $1^{\prime}$ | - | 3 |
| 4 | $15^{\prime}$ | 13' | 11' | $10^{\prime}$ | $9^{\prime}$ | $8{ }^{\prime}$ | $7{ }^{\prime}$ | 6 | $5 '$ | $4 '$ | $4 '$ | $3 '$ | $3 '$ | 2' | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1 '$ | - | - | - | - | 4 |
| 5 | $9{ }^{\prime}$ | $8^{\prime}$ | $7{ }^{\prime}$ | 6 | $5 '$ | $4^{\prime}$ | $4 '$ | $3 '$ | $3 '$ | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | - | - | - | - | - | - | - | - | 5 |
| 6 | $6^{\prime}$ | $5 '$ | 4' | $4 '$ | $3 '$ | $3 '$ | $2 '$ | $2 '$ | $2 '$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | - | - | - | - | - | - | - | - | - | - | 6 |
| 7 | $4^{\prime}$ | $3 '$ | $3 '$ | $2 '$ | $2^{\prime}$ | $2^{\prime}$ | $2 '$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1{ }^{\prime}$ | - | - | - | - | - | - | - | - | - | - | - | - | 7 |
| 8 | 3' | $2^{\prime}$ | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1{ }^{\prime}$ | $1^{\prime}$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 8 |
| 9 | $2^{\prime}$ | $2^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1{ }^{\prime}$ | $1{ }^{\prime}$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 9 |
| 10 | $2^{\prime}$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | $1 '$ | $1^{\prime}$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 10 |
| 11 | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 11 |
| 12 | $1^{\prime}$ | $1^{\prime}$ | $1^{\prime}$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 12 |
| 13 | $1 '$ | $1 '$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 13 |
| Shots | 19 | 21 | 24 | 28 | 31 | 35 | 40 | 47 | 57 | 63 | 71 | 81 | 95 | 114 | 143 | 171 | 190 | 214 | 245 | 286 | 343 | 429 | 572 | 859 | Shots |

The Control Rating of a weapon can be approximated as follows for each type of firearm. Rcl is the recoil penalty and RoF is the number of rounds discharged in $1 S R$ (approximately rounds per minute $\div 100$ ).
Note that there is instability even in fixed weapon as no weapon is held perfectly immobile. The highest possible Control Rating to hit with a second round at one foot is 1718 .

Handgun: $(R c l+3) \times 90 \div R o F$
Submachinegun: $(R c l+2) \times 60 \div$ RoF
Rifle: $(R c l+1) \times 30 \div$ RoF
Fixed Position: Rcl $\times 15 \div$ RoF
The recoil penalty of a weapon can be approximated from bullet momentum (BM), empty weapon weight (WW), and the type of action as it pertains to recoil ( $k$ ).

BM: grams $\times \mathrm{m} / \mathrm{s}$
WW: kilograms
k: 250 for non-automatic operation, 375 for semi-automatic or compensated, 500 for semi-automatic and compensated and 750 for semi-automatic, compensated and buffered.

Recoil: $B M \div W W \div k$

An M16-A1 weighs about 2.89 kilograms when empty, fires a 3.56 gram bullet at $975 \mathrm{~m} / \mathrm{s}$ with a cyclic rate of fire of about 800 rounds per minute and is an automatic operation with compensation and buffer spring yielding a recoil penalty of 3.56 grams $\times 975 \mathrm{~m} / \mathrm{s} \div 2.89 \div$ $750=1.60138=2$. For precision in calculating the Control Rating the unrounded recoil value is used so the Control Rating $=(1.60138+1)$ $\times 30 \div 8.00=9.75517$. Given the columns on the table this is closest to $93 / 4$ so that value is used.

A Colt SCAMP weighs about 1.02 kilograms when empty, fires a 2.6 gram bullet at $640 \mathrm{~m} / \mathrm{s}$ with a cyclic rate of fire of about 1500 rounds per minute and is an automatic operation with compensation. This yields a recoil of 2.6 grams times $640 \mathrm{~m} / \mathrm{s} \div 1.02$ kilograms $\div 500$ $=3.26275=3$. Again, for precision the unrounded recoil value is used which gives a Control Rating of $(3.26275+3) \times 90 \div 21=26.8404$.
The next highest column on the table is 28 with the previous being 24 . In this case the rounded value of 27 is recorded as it will still result in the correct column being used.

A Mauser M32 weighs about 1.13 kilograms, fires a 5.8 gram bullet at $413 \mathrm{~m} / \mathrm{s}$ with cyclic rate of about 900 rpm . $\mathrm{Rcl}=6, C R=72$

Tim Doty

## Combat Round Sheet

Advantage Declaration of Intent (Opponent Focusing on, Attack/Spell) Damage MP

| Cha | cter: |  |  | Character: |  |  |  | Character: |  |  |  | HP: <br> FP: <br> MP: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Adv | Declaration | Wound | MP | Adv | Declaration | Wound | MP | Adv | Declaration | Wound | MP |  |
|  |  |  |  |  |  |  | - |  |  |  |  |  |
| - |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | - |  |  |  | - |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | FP: |
|  |  |  |  |  |  |  |  |  |  |  |  | MP: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| - |  |  | - | - |  |  | - | - |  |  | - | $\begin{aligned} & \text { FP: } \\ & \text { MP: } \end{aligned}$ |
| - |  |  | - | - | - | - | - | - |  |  | - |  |
| - |  | - | - | - |  | - | - | - |  |  | - |  |
| Cha | acter: |  |  | Char | acter: |  |  | Char | acter: |  |  |  |
| Adv | Declaration | Wound | MP | Adv | Declaration | Wound | MP | Adv | Declaration | Wound | MP | HP: FP: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | - | - |  |  | - | - |  |  | - |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | - |  |  |  |  |  |  |  | FP: |
|  |  |  |  |  |  |  |  |  |  |  |  | MP: |
|  |  |  | - |  |  |  | - | - |  |  |  |  |
|  |  |  |  |  |  |  | - |  |  |  |  |  |
|  |  |  | - | - |  |  | - | - |  |  | - |  |
|  |  |  |  | - |  |  | - | - |  |  |  | FP: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

## Damage From Movement

| Mv | XT | $V T$ | $T$ | VS | $S$ | MS | M | ML | $L$ | L | H | E | TT | $G$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 |
| 3 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 0.5 | 0.6 | 0.7 | 0.8 |
| 4 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.7 | 0.8 | 1.0 | 1.1 | 1.2 | 1.4 |
| 5 | 0.0 | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.6 | 0.9 | 1.1 | 1.3 | 1.5 | 1.7 | 1.9 | 2.1 |
| 6 | 0.0 | 0.1 | 0.2 | 0.3 | 0.5 | 0.6 | 0.9 | 1.2 | 1.5 | 1.8 | 2.1 | 2.5 | 2.8 | 3.1 |
| 7 | 0.1 | 0.1 | 0.2 | 0.4 | 0.6 | 0.8 | 1.3 | 1.7 | 2.1 | 2.5 | 2.9 | 3.3 | 3.8 | 4.2 |
| 8 | 0.1 | 0.1 | 0.3 | 0.5 | 0.8 | 1.1 | 1.6 | 2.2 | 2.7 | 3.3 | 3.8 | 4.4 | 4.9 | 5.4 |
| 9 | 0.1 | 0.2 | 0.3 | 0.7 | 1.0 | 1.4 | 2.1 | 2.8 | 3.4 | 4.1 | 4.8 | 5.5 | 6.2 | 6.9 |
| 10 | 0.1 | 0.2 | 0.4 | 0.9 | 1.3 | 1.7 | 2.6 | 3.4 | 4.3 | 5.1 | 6.0 | 6.8 | 7.7 | 8.5 |
| 11 | 0.1 | 0.3 | 0.5 | 1.0 | 1.5 | 2.1 | 3.1 | 4.1 | 5.1 | 6.2 | 7.2 | 8.2 | 9.3 | 10.3 |
| 12 | 0.2 | 0.3 | 0.6 | 1.2 | 1.8 | 2.5 | 3.7 | 4.9 | 6.1 | 7.4 | 8.6 | 9.8 | 11.0 | 12.3 |
| 13 | 0.2 | 0.4 | 0.7 | 1.4 | 2.2 | 2.9 | 4.3 | 5.8 | 7.2 | 8.6 | 10.1 | 11.5 | 12.9 | 14.4 |
| 14 | 0.2 | 0.4 | 0.8 | 1.7 | 2.5 | 3.3 | 5.0 | 6.7 | 8.3 | 10.0 | 11.7 | 13.3 | 15.0 | 16.7 |
| 15 | 0.2 | 0.5 | 1.0 | 1.9 | 2.9 | 3.8 | 5.7 | 7.7 | 9.6 | 11.5 | 13.4 | 15.3 | 17.2 | 19.1 |
| 16 | 0.3 | 0.5 | 1.1 | 2.2 | 3.3 | 4.4 | 6.5 | 8.7 | 10.9 | 13.1 | 15.3 | 17.4 | 19.6 | 21.8 |
| 17 | 0.3 | 0.6 | 1.2 | 2.5 | 3.7 | 4.9 | 7.4 | 9.8 | 12.3 | 14.8 | 17.2 | 19.7 | 22.1 | 24.6 |
| 18 | 0.3 | 0.7 | 1.4 | 2.8 | 4.1 | 5.5 | 8.3 | 11.0 | 13.8 | 16.5 | 19.3 | 22.1 | 24.8 | 27.6 |
| 19 | 0.4 | 0.8 | 1.5 | 3.1 | 4.6 | 6.1 | 9.2 | 12.3 | 15.4 | 18.4 | 21.5 | 24.6 | 27.7 | 30.7 |
| 20 | 0.4 | 0.9 | 1.7 | 3.4 | 5.1 | 6.8 | 10.2 | 13.6 | 17.0 | 20.4 | 23.8 | 27.2 | 30.6 | 34.0 |
| 21 | 0.5 | 0.9 | 1.9 | 3.8 | 5.6 | 7.5 | 11.3 | 15.0 | 18.8 | 22.5 | 26.3 | 30.0 | 33.8 | 37.5 |
| 22 | 0.5 | 1.0 | 2.1 | 4.1 | 6.2 | 8.2 | 12.4 | 16.5 | 20.6 | 24.7 | 28.8 | 33.0 | 37.1 | 41.2 |
| 23 | 0.6 | 1.1 | 2.3 | 4.5 | 6.8 | 9.0 | 13.5 | 18.0 | 22.5 | 27.0 | 31.5 | 36.0 | 40.5 | 45.0 |
| 24 | 0.6 | 1.2 | 2.5 | 4.9 | 7.4 | 9.8 | 14.7 | 19.6 | 24.5 | 29.4 | 34.3 | 39.2 | 44.1 | 49.0 |
| 25 | 0.7 | 1.3 | 2.7 | 5.3 | 8.0 | 10.6 | 16.0 | 21.3 | 26.6 | 31.9 | 37.2 | 42.6 | 47.9 | 53.2 |
| 26 | 0.7 | 1.4 | 2.9 | 5.8 | 8.6 | 11.5 | 17.3 | 23.0 | 28.8 | 34.5 | 40.3 | 46.0 | 51.8 | 57.5 |
| 27 | 0.8 | 1.6 | 3.1 | 6.2 | 9.3 | 12.4 | 18.6 | 24.8 | 31.0 | 37.2 | 43.4 | 49.6 | 55.8 | 62.0 |
| 28 | 0.8 | 1.7 | 3.3 | 6.7 | 10.0 | 13.3 | 20.0 | 26.7 | 33.4 | 40.0 | 46.7 | 53.4 | 60.1 | 66.7 |
| 29 | 0.9 | 1.8 | 3.6 | 7.2 | 10.7 | 14.3 | 21.5 | 28.6 | 35.8 | 42.9 | 50.1 | 57.3 | 64.4 | 71.6 |
| 30 | 1.0 | 1.9 | 3.8 | 7.7 | 11.5 | 15.3 | 23.0 | 30.6 | 38.3 | 46.0 | 53.6 | 61.3 | 68.9 | 76.6 |
| 31 | 1.0 | 2.0 | 4.1 | 8.2 | 12.3 | 16.4 | 24.5 | 32.7 | 40.9 | 49.1 | 57.3 | 65.4 | 73.6 | 81.8 |
| 32 | 1.1 | 2.2 | 4.4 | 8.7 | 13.1 | 17.4 | 26.1 | 34.9 | 43.6 | 52.3 | 61.0 | 69.7 | 78.4 | 87.1 |
| 33 | 1.2 | 2.3 | 4.6 | 9.3 | 13.9 | 18.5 | 27.8 | 37.1 | 46.3 | 55.6 | 64.9 | 74.1 | 83.4 | 92.7 |
| 34 | 1.2 | 2.5 | 4.9 | 9.8 | 14.8 | 19.7 | 29.5 | 39.4 | 49.2 | 59.0 | 68.9 | 78.7 | 88.5 | 98.4 |
| 35 | 1.3 | 2.6 | 5.2 | 10.4 | 15.6 | 20.9 | 31.3 | 41.7 | 52.1 | 62.6 | 73.0 | 83.4 | 93.8 | 104.3 |
| 36 | 1.4 | 2.8 | 5.5 | 11.0 | 16.5 | 22.1 | 33.1 | 44.1 | 55.1 | 66.2 | 77.2 | 88.2 | 99.3 | 110.3 |
| 37 | 1.5 | 2.9 | 5.8 | 11.7 | 17.5 | 23.3 | 35.0 | 46.6 | 58.3 | 69.9 | 81.6 | 93.2 | 104.9 | 116.5 |
| 38 | 1.5 | 3.1 | 6.1 | 12.3 | 18.4 | 24.6 | 36.9 | 49.2 | 61.4 | 73.7 | 86.0 | 98.3 | 110.6 | 122.9 |
| 39 | 1.6 | 3.2 | 6.5 | 12.9 | 19.4 | 25.9 | 38.8 | 51.8 | 64.7 | 77.7 | 90.6 | 103.6 | 116.5 | 129.4 |
| 40 | 1.7 | 3.4 | 6.8 | 13.6 | 20.4 | 27.2 | 40.9 | 54.5 | 68.1 | 81.7 | 95.3 | 108.9 | 122.6 | 136.2 |
| 41 | 1.8 | 3.6 | 7.2 | 14.3 | 21.5 | 28.6 | 42.9 | 57.2 | 71.5 | 85.8 | 100.1 | 114.5 | 128.8 | 143.1 |
| 42 | 1.9 | 3.8 | 7.5 | 15.0 | 22.5 | 30.0 | 45.0 | 60.1 | 75.1 | 90.1 | 105.1 | 120.1 | 135.1 | 150.1 |
| 43 | 2.0 | 3.9 | 7.9 | 15.7 | 23.6 | 31.5 | 47.2 | 62.9 | 78.7 | 94.4 | 110.2 | 125.9 | 141.6 | 157.4 |
| 44 | 2.1 | 4.1 | 8.2 | 16.5 | 24.7 | 33.0 | 49.4 | 65.9 | 82.4 | 98.9 | 115.3 | 131.8 | 148.3 | 164.8 |

Damage From Movement

| Mv | XT | $V T$ | $T$ | VS | $S$ | MS | M | ML | $L$ | VL | H | E | TT | G |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 |
| 3 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 0.5 | 0.6 | 0.7 | 0.8 |
| 4 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.7 | 0.8 | 1.0 | 1.1 | 1.2 | 1.4 |
| 5 | 0.0 | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.6 | 0.9 | 1.1 | 1.3 | 1.5 | 1.7 | 1.9 | 2.1 |
| 6 | 0.0 | 0.1 | 0.2 | 0.3 | 0.5 | 0.6 | 0.9 | 1.2 | 1.5 | 1.8 | 2.1 | 2.5 | 2.8 | 3.1 |
| 7 | 0.1 | 0.1 | 0.2 | 0.4 | 0.6 | 0.8 | 1.3 | 1.7 | 2.1 | 2.5 | 2.9 | 3.3 | 3.8 | 4.2 |
| 8 | 0.1 | 0.1 | 0.3 | 0.5 | 0.8 | 1.1 | 1.6 | 2.2 | 2.7 | 3.3 | 3.8 | 4.4 | 4.9 | 5.4 |
| 9 | 0.1 | 0.2 | 0.3 | 0.7 | 1.0 | 1.4 | 2.1 | 2.8 | 3.4 | 4.1 | 4.8 | 5.5 | 6.2 | 6.9 |
| 10 | 0.1 | 0.2 | 0.4 | 0.9 | 1.3 | 1.7 | 2.6 | 3.4 | 4.3 | 5.1 | 6.0 | 6.8 | 7.7 | 8.5 |
| 11 | 0.1 | 0.3 | 0.5 | 1.0 | 1.5 | 2.1 | 3.1 | 4.1 | 5.1 | 6.2 | 7.2 | 8.2 | 9.3 | 10.3 |
| 12 | 0.2 | 0.3 | 0.6 | 1.2 | 1.8 | 2.5 | 3.7 | 4.9 | 6.1 | 7.4 | 8.6 | 9.8 | 11.0 | 12.3 |
| 13 | 0.2 | 0.4 | 0.7 | 1.4 | 2.2 | 2.9 | 4.3 | 5.8 | 7.2 | 8.6 | 10.1 | 11.5 | 12.9 | 14.4 |
| 14 | 0.2 | 0.4 | 0.8 | 1.7 | 2.5 | 3.3 | 5.0 | 6.7 | 8.3 | 10.0 | 11.7 | 13.3 | 15.0 | 16.7 |
| 15 | 0.2 | 0.5 | 1.0 | 1.9 | 2.9 | 3.8 | 5.7 | 7.7 | 9.6 | 11.5 | 13.4 | 15.3 | 17.2 | 19.1 |
| 16 | 0.3 | 0.5 | 1.1 | 2.2 | 3.3 | 4.4 | 6.5 | 8.7 | 10.9 | 13.1 | 15.3 | 17.4 | 19.6 | 21.8 |
| 17 | 0.3 | 0.6 | 1.2 | 2.5 | 3.7 | 4.9 | 7.4 | 9.8 | 12.3 | 14.8 | 17.2 | 19.7 | 22.1 | 24.6 |
| 18 | 0.3 | 0.7 | 1.4 | 2.8 | 4.1 | 5.5 | 8.3 | 11.0 | 13.8 | 16.5 | 19.3 | 22.1 | 24.8 | 27.6 |
| 19 | 0.4 | 0.8 | 1.5 | 3.1 | 4.6 | 6.1 | 9.2 | 12.3 | 15.4 | 18.4 | 21.5 | 24.6 | 27.7 | 30.7 |
| 20 | 0.4 | 0.9 | 1.7 | 3.4 | 5.1 | 6.8 | 10.2 | 13.6 | 17.0 | 20.4 | 23.8 | 27.2 | 30.6 | 34.0 |
| 21 | 0.5 | 0.9 | 1.9 | 3.8 | 5.6 | 7.5 | 11.3 | 15.0 | 18.8 | 22.5 | 26.3 | 30.0 | 33.8 | 37.5 |
| 22 | 0.5 | 1.0 | 2.1 | 4.1 | 6.2 | 8.2 | 12.4 | 16.5 | 20.6 | 24.7 | 28.8 | 33.0 | 37.1 | 41.2 |
| 23 | 0.6 | 1.1 | 2.3 | 4.5 | 6.8 | 9.0 | 13.5 | 18.0 | 22.5 | 27.0 | 31.5 | 36.0 | 40.5 | 45.0 |
| 24 | 0.6 | 1.2 | 2.5 | 4.9 | 7.4 | 9.8 | 14.7 | 19.6 | 24.5 | 29.4 | 34.3 | 39.2 | 44.1 | 49.0 |
| 25 | 0.7 | 1.3 | 2.7 | 5.3 | 8.0 | 10.6 | 16.0 | 21.3 | 26.6 | 31.9 | 37.2 | 42.6 | 47.9 | 53.2 |
| 26 | 0.7 | 1.4 | 2.9 | 5.8 | 8.6 | 11.5 | 17.3 | 23.0 | 28.8 | 34.5 | 40.3 | 46.0 | 51.8 | 57.5 |
| 27 | 0.8 | 1.6 | 3.1 | 6.2 | 9.3 | 12.4 | 18.6 | 24.8 | 31.0 | 37.2 | 43.4 | 49.6 | 55.8 | 62.0 |
| 28 | 0.8 | 1.7 | 3.3 | 6.7 | 10.0 | 13.3 | 20.0 | 26.7 | 33.4 | 40.0 | 46.7 | 53.4 | 60.1 | 66.7 |
| 29 | 0.9 | 1.8 | 3.6 | 7.2 | 10.7 | 14.3 | 21.5 | 28.6 | 35.8 | 42.9 | 50.1 | 57.3 | 64.4 | 71.6 |
| 30 | 1.0 | 1.9 | 3.8 | 7.7 | 11.5 | 15.3 | 23.0 | 30.6 | 38.3 | 46.0 | 53.6 | 61.3 | 68.9 | 76.6 |
| 31 | 1.0 | 2.0 | 4.1 | 8.2 | 12.3 | 16.4 | 24.5 | 32.7 | 40.9 | 49.1 | 57.3 | 65.4 | 73.6 | 81.8 |
| 32 | 1.1 | 2.2 | 4.4 | 8.7 | 13.1 | 17.4 | 26.1 | 34.9 | 43.6 | 52.3 | 61.0 | 69.7 | 78.4 | 87.1 |
| 33 | 1.2 | 2.3 | 4.6 | 9.3 | 13.9 | 18.5 | 27.8 | 37.1 | 46.3 | 55.6 | 64.9 | 74.1 | 83.4 | 92.7 |
| 34 | 1.2 | 2.5 | 4.9 | 9.8 | 14.8 | 19.7 | 29.5 | 39.4 | 49.2 | 59.0 | 68.9 | 78.7 | 88.5 | 98.4 |
| 35 | 1.3 | 2.6 | 5.2 | 10.4 | 15.6 | 20.9 | 31.3 | 41.7 | 52.1 | 62.6 | 73.0 | 83.4 | 93.8 | 104.3 |
| 36 | 1.4 | 2.8 | 5.5 | 11.0 | 16.5 | 22.1 | 33.1 | 44.1 | 55.1 | 66.2 | 77.2 | 88.2 | 99.3 | 110.3 |
| 37 | 1.5 | 2.9 | 5.8 | 11.7 | 17.5 | 23.3 | 35.0 | 46.6 | 58.3 | 69.9 | 81.6 | 93.2 | 104.9 | 116.5 |
| 38 | 1.5 | 3.1 | 6.1 | 12.3 | 18.4 | 24.6 | 36.9 | 49.2 | 61.4 | 73.7 | 86.0 | 98.3 | 110.6 | 122.9 |
| 39 | 1.6 | 3.2 | 6.5 | 12.9 | 19.4 | 25.9 | 38.8 | 51.8 | 64.7 | 77.7 | 90.6 | 103.6 | 116.5 | 129.4 |
| 40 | 1.7 | 3.4 | 6.8 | 13.6 | 20.4 | 27.2 | 40.9 | 54.5 | 68.1 | 81.7 | 95.3 | 108.9 | 122.6 | 136.2 |
| 41 | 1.8 | 3.6 | 7.2 | 14.3 | 21.5 | 28.6 | 42.9 | 57.2 | 71.5 | 85.8 | 100.1 | 114.5 | 128.8 | 143.1 |
| 42 | 1.9 | 3.8 | 7.5 | 15.0 | 22.5 | 30.0 | 45.0 | 60.1 | 75.1 | 90.1 | 105.1 | 120.1 | 135.1 | 150.1 |
| 43 | 2.0 | 3.9 | 7.9 | 15.7 | 23.6 | 31.5 | 47.2 | 62.9 | 78.7 | 94.4 | 110.2 | 125.9 | 141.6 | 157.4 |
| 44 | 2.1 | 4.1 | 8.2 | 16.5 | 24.7 | 33.0 | 49.4 | 65.9 | 82.4 | 98.9 | 115.3 | 131.8 | 148.3 | 164.8 |
| 45 | 2.2 | 4.3 | 8.6 | 17.2 | 25.9 | 34.5 | 51.7 | 68.9 | 86.2 | 103.4 | 120.6 | 137.9 | 155.1 | 172.3 |


| Turn Rate |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size | Mode | $180^{\circ}$ | $120^{\circ}$ | 1 | 2 | 3 | 4 | +1 |
| Extremely Tiny | Biped | 1,2 | 3-7 | 8-21 | 22-42 | 43-63 | 64-84 | +21 |
|  | Quadruped | 1-4 | 5-14 | 15-42 | 43-84 | 85-126 | 127-168 | +42 |
|  | Flying | 1 | 2-4 | 5-14 | 15-28 | 29-42 | 43-56 | +14 |
| Very Tiny | Biped | 1,2 | 3-6 | 7-20 | 21-40 | 41-60 | 61-80 | +20 |
|  | Quadruped | 1-4 | 5-13 | 14-39 | 40-78 | 79-117 | 118-156 | +39 |
|  | Flying | 1 | 2-4 | 5-13 | 14-26 | 27-39 | 40-52 | +13 |
| Tiny | Biped | 1,2 | 3-6 | 7-18 | 19-36 | 37-54 | 55-72 | +18 |
|  | Quadruped | 1-4 | 5-12 | 13-36 | 37-72 | 73-108 | 109-144 | +36 |
|  | Flying | 1 | 2-4 | 5-12 | 13-24 | 25-36 | 37-48 | +12 |
| Very Small | Biped | 1 | 2-5 | 6-17 | 18-34 | 35-51 | 52-68 | +17 |
|  | Quadruped | 1-3 | 4-11 | 12-33 | 34-66 | 67-99 | 100-132 | +33 |
|  | Flying | 1 | 2, 3 | 4-11 | 12-22 | 23-33 | 34-44 | +11 |
| Small | Biped | 1 | 2-5 | 6-15 | 16-30 | 31-45 | 46-60 | +15 |
|  | Quadruped | 1-3 | 4-10 | 11-30 | 31-60 | 61-90 | 91-120 | +30 |
|  | Flying | 1 | 2, 3 | 4-10 | 11-20 | 21-30 | 31-40 | +10 |
| Medium Small | Biped | 1 | 2-4 | 5-14 | 15-28 | 29-42 | 43-56 | +14 |
|  | Quadruped | 1-3 | 4-9 | 10-27 | 28-54 | 55-81 | 82-108 | +27 |
|  | Flying | 1 | 2, 3 | 4-9 | 10-18 | 19-27 | 28-36 | +9 |
| Medium | Biped | 1 | 2-4 | 5-12 | 13-24 | 25-36 | 37-48 | +12 |
|  | Quadruped | 1,2 | 3-8 | 9-24 | 25-48 | 49-72 | 73-96 | +24 |
|  | Flying | - | 1,2 | 3-8 | 9-16 | 17-24 | 25-32 | +8 |
| Medium Large | Biped | 1 | 2, 3 | 4-11 | 12-22 | 23-33 | 34-44 | +11 |
|  | Quadruped | 1,2 | 3-7 | 8-21 | 22-42 | 43-63 | 64-84 | +21 |
|  | Flying | - | 1,2 | 3-7 | 8-14 | 15-21 | 22-28 | +7 |
| Large | Biped | 1 | 2, 3 | 4-9 | 10-18 | 19-27 | 28-36 | +9 |
|  | Quadruped | 1,2 | 3-6 | 7-18 | 19-36 | 37-54 | 55-72 | +18 |
|  | Flying | - | 1,2 | 3-6 | 7-12 | 13-18 | 19-24 | +6 |
| Very Large | Biped | - | 1,2 | 3-8 | 9-16 | 17-24 | 25-32 | +8 |
|  | Quadruped | 1 | 2-5 | 6-15 | 16-30 | 31-45 | 46-60 | +15 |
|  | Flying | - | 1 | 2-5 | 6-10 | 11-15 | 16-20 | +5 |
| Huge | Biped | - | 1,2 | 3-6 | 7-12 | 13-18 | 19-24 | +6 |
|  | Quadruped | 1 | 2-4 | 5-12 | 13-24 | 25-36 | 37-48 | +12 |
|  | Flying | - | 1 | 2-4 | 5-8 | 9-12 | 13-16 | +4 |
| Enormous | Biped | - | 1 | 2-5 | 6-10 | 11-15 | 16-20 | +5 |
|  | Quadruped | 1 | 2, 3 | 4-9 | 10-18 | 19-27 | 28-36 | +9 |
|  | Flying | - | 1 | 2, 3 | 4-6 | 7-9 | 10-12 | +3 |
| Titanic | Biped | - | 1 | 2, 3 | 4-6 | 7-9 | 10-12 | +3 |
|  | Quadruped | - | 1,2 | 3-6 | 7-12 | 13-18 | 19-24 | +6 |
|  | Flying | - | - | 1,2 | 3, 4 | 5, 6 | 7, 8 | +2 |
| Gargantuan | Biped | - | - | 1,2 | 3, 4 | 5,6 | 7, 8 | +2 |
|  | Quadruped | - | 1 | 2, 3 | 4-6 | 7-9 | 10-12 | +3 |
|  | Flying | - | - | 1 | 2 | 3 | 4 | +1 |

## Tim Doty

| Hit Location |  |  |  |
| :--- | :---: | :---: | :---: |
|  | Human |  |  |
| Location | Unarmed | Melee | Ranged |
| Head | 19,20 | 19,20 | 19,20 |
| Left Arm | $16-18$ | 17,18 | 17,18 |
| Right Arm | $13-15$ | 15,16 | 15,16 |
| Chest | $10-12$ | $11-14$ | $12-14$ |
| Abdomen | $7-9$ | $7-10$ | $9-11$ |
| Left Leg | $4-6$ | $4-6$ | $5-8$ |
| Right Leg | $1-3$ | $1-3$ | $1-4$ |
|  |  | Pixie |  |
| Head | 20 | 19,20 | 20 |
| Left Wing | 18,19 | 17,18 | 18,19 |
| Right Wing | 16,17 | 15,16 | 16,17 |
| Left Arm | 14,15 | 13,14 | 14,15 |
| Right Arm | 12,13 | 11,12 | 12,13 |
| Chest | $10-11$ | $8-10$ | $8-11$ |
| Abdomen | $7-9$ | $5-7$ | $5-7$ |
| Left Leg | $4-6$ | 3,4 | 3,4 |
| Right Leg | $1-3$ | 1,2 | 1,2 |


| Centaur Hit Location |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Location | Unarmed | Melee | Ranged | Side | Rear |
| Head | 19,20 | 19,20 | 19,20 | 20 | 19,20 |
| Left Arm | $16-18$ | 17,18 | 17,18 | 19 | 17,18 |
| Right Arm | $13-15$ | 15,16 | 15,16 | 18 | 15,16 |
| Chest | $10-12$ | $11-14$ | $12-14$ | 16,17 | $12-14$ |
| Left Foreleg | 8,9 | 9,10 | $9-11$ | 14,15 | 11 |
| Right Foreleg | 6,7 | 7,8 | $6-8$ | 12,13 | 10 |
| Forequarters | 4,5 | $4-6$ | 4,5 | $8-11$ | 9 |
| Hindquarters | 3 | 3 | 3 | $5-7$ | 7,8 |
| Left Hindleg | 2 | 2 | 2 | 3,4 | $4-6$ |
| Right Hindleg | 1 | 1 | 1 | 1,2 | $1-3$ |


| Lizardman Hit Location |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Location | Unarmed | Melee | Ranged | Side | Rear |
| Head | 19,20 | 19,20 | 19,20 | 19,20 | 19,20 |
| Left Arm | $16-18$ | 17,18 | 17,18 | 17,18 | 17,18 |
| Right Arm | $13-15$ | 15,16 | 15,16 | 15,16 | 15,16 |
| Chest | 11,12 | $12-14$ | $12-14$ | $12-14$ | $12-14$ |
| Abdomen | 9,10 | $9-11$ | 10,11 | $9-11$ | $9-11$ |
| Tail | 7,8 | 7,8 | 9 | 7,8 | 7,8 |
| Left Leg | $4-6$ | $4-6$ | $5-8$ | $4-6$ | $4-6$ |
| Right Leg | $1-3$ | $1-3$ | $1-4$ | $1-3$ | $1-3$ |

## Speak: native speakers of Achaian

| Average | Hard | Very Hard |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Middle Kingdoms | Akkadian | Ašuri | High Drakkon | Oogah |
|  | Ossynian | Cobb | High Elvish | Queran |
|  |  | Durgah | Ilryian | Ræf |
|  |  | Dvergar | Low Cobb | Sidhe |
|  | Elder | Low Drakkon | Sindar |  |
|  | Garbi | Nipponese | Sylvan |  |
|  |  | Gurk | Nobb | Umbar |
|  |  | Han | Old Cobb | Wilding |

## Speak: native speakers of Akkadian

| Average | Hard | Very Hard |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Garbi | Achaian | Ašuri | High Elvish | Queran |
|  | Middle Kingdoms | Cobb | Ilryian | Ræf |
|  | Ossynian | Dvergar | Low Cobb | Sidhe |
|  |  | Durgah | Low Drakkon | Sindar |
|  |  | Elder | Nipponese | Sylvan |
|  | Gurk | Nobb | Umbar |  |
|  |  | Han | Old Cobb | Wilding |
|  |  | High Drakkon | Oogah |  |

## Speak: native speakers of Ašuri

| Average | Hard | Very Hard |
| :--- | :--- | :--- |
|  | Durgah | Achaian |
|  | High Drakkon | Akkadian |
|  | Low Drakkon | Cobb |
|  |  | Dvergar |
|  | Elder |  |
|  | Garbi |  |
|  |  | Gurk |
|  |  | Han |


| High Elvish | Ossynian <br> Queran |
| :--- | :--- |
| Ilryian | Ræf |
| Low Cobb | Sidhe |
| Middle Kingdoms | Sidhe |
| Nipponese | Sindar |
| Nobb | Sylvan |
| Old Cobb | Umbar |
| Oogah | Wilding |

Speak: native speakers of Cobb

| Average | Hard | Very Hard |
| :--- | :--- | :--- |
| Low Cobb | Nobb | Achaian |
|  | Old Cobb | Akkadian |
|  |  | Ašuri |
|  | Durgah |  |
|  |  | Dvergar |
|  | Elder |  |
|  | Garbi |  |
|  |  | Gurk |


| Han | Ossynian |
| :--- | :--- |
| High Drakkon | Queran |
| High Elvish | Ræf |
| Ilryian | Sidhe |
| Low Drakkon | Sindar |
| Middle Kingdoms | Sylvan |
| Nipponese | Umbar |
| Oogah | Wilding |

## Speak: native speakers of Durgah

| Average | Hard | Very Hard |
| :--- | :--- | :--- |
| Oogah | Achaian |  |
|  | Akkadian |  |
|  | Ašuri |  |
|  | Cobb |  |
|  | Dvergar |  |
|  | Elder |  |
|  | Garbi |  |
|  | Gurk |  |
|  | Han |  |

## Speak: native speakers of Dvergar

| Average | Hard | Very Hard |
| :--- | :--- | :--- |
| Ossynian | Ilryian | Achaian |
|  | Sylvan | Akkadian |
|  |  | Ašuri |
|  | Cobb |  |
|  |  | Durgah |
|  |  | Elder |
|  | Garbi |  |
|  |  | Gurk |


| Han | Old Cobb |
| :--- | :--- |
| High Drakkon | Oogah |
| High Elvish | Queran |
| Low Cobb | Ræf |
| Low Drakkon | Sidhe |
| Middle Kingdoms | Sindar |
| Nipponese | Umbar |
| Nobb | Wilding |

## Speak: native speakers of Elder

| Average | Hard | Very Hard |
| :--- | :--- | :--- |
|  | High Elvish | Achaian |
|  | Old Cobb | Akkadian |
|  |  | Ašuri |
|  | Cobb |  |
|  |  | Durgah |
|  | Dvergar |  |
|  | Garbi |  |
|  |  | Gurk |
|  |  | Han |

## Speak: native speakers of Ġarbi

| Average | Hard |
| :--- | :--- |
| Akkadian | Aery Hard |
|  | Achaian |
|  | Ašuri |
|  | Cobb |
|  | Durgah |
|  | Dvergar |
|  | Elder |
|  | Gurk |
|  | Han |
|  | High Drakkon |

## Speak: native speakers of Gurk

Average
Hard
Low Cobb

Very Hard
Achaian
Akkadian
Ašuri
Cobb
Durgah
Dvergar
Elder
Garbi
Han
Speak: native speakers of Han

| Average | Hard |
| :--- | :--- |
| Nipponese | Ach Hard |
|  |  |
|  | Akkaian |
|  | Ašuri |
|  | Cobb |
|  | Durgah |
|  | Dvergar |
|  | Elder |
|  | Garbi |
|  | Gurk |

Achaian
Akkadian

Cobb
Durgah
Dvergar
Garbi
Gurk

Average
Low Drakkon
Hard
Ašuri
Durgah

Very Hard
Achaian
Akkadian
Cobb
Dvergar
Elder
Garbi
Gurk
Han
High Elvish
Speak: native speakers of High Elvish

| Average | Hard | Very Hard |
| :--- | :--- | :--- |
|  | Elder | Ašuri |
|  | Ilryian | Achaian |
|  | Old Cobb | Akkadian |
|  | Queran | Cobb |
|  | Ræf | Durgah |
|  | Sidhe | Dvergar |
|  | Sylvan | Garbi |
|  | Wilding | Gurk |

Han
High Drakkon
Low Cobb
Low Drakkon
Middle Kingdoms
Nipponese
Nobb
Oogah

Ossynian
Queran
Ræf
Sidhe
Sindar
Sylvan
Umbar
Wilding

| High Drakkon | Ossynian <br> High Elvish |
| :--- | :--- |
| Queran |  |
| Ilryian | Ræf |
| Low Cobb | Sidhe |
| Low Drakkon | Sindar |
| Middle Kingdoms | Sylvan |
| Nobb | Umbar |
| Old Cobb | Wilding |
| Oogah |  |


| Ilryian | Ræf |
| :--- | :--- |
| Low Cobb | Sidhe |
| Middle Kingdoms | Sindar |
| Nipponese | Sylvan |
| Nobb | Umbar |
| Old Cobb | Wilding |
| Oogah |  |
| Ossynian |  |
| Queran |  |

Ossynian
Sindar
Umbar

## Speak: native speakers of Ilryian

| Average | Hard | Very Hard |
| :--- | :--- | :--- |
| Sylvan | Dvergar | Achaian |
|  | High Elvish | Akkadian |
|  | Queran | Ašuri |
|  | Ræf | Cobb |
|  | Sidhe | Durgah |
|  | Wilding | Elder |
|  |  | Garbi |


| Gurk | Nobb |
| :--- | :--- |
| Han | Old Cobb |
| High Drakkon | Oogah |
| Low Cobb | Ossynian |
| Low Drakkon | Sindar |
| Middle Kingdoms | Umbar |
| Nipponese |  |

## Speak: native speakers of Low Cobb

| Average | Hard | Very Hard |
| :--- | :--- | :--- |
| Cobb | Gurk | Achaian |
|  | Nobb | Akkadian |
|  | Old Cobb | Ašuri |
|  |  | Durgah |
|  |  | Dvergar |
|  |  | Elder |
|  |  | Garbi |
|  |  | Han |


| High Drakkon | Queran |
| :--- | :--- |
| High Elvish | Ræf |
| Ilryian | Sidhe |
| Low Drakkon | Sindar |
| Middle Kingdoms | Sylvan |
| Nipponese | Umbar |
| Oogah | Wilding |
| Ossynian |  |

## Speak: native speakers of Low Drakkon

| Average | Hard |
| :--- | :--- |
| High Drakkon | Ašuri |
|  | Durgah |

Very Hard

| Achaian | Ilryian | Ræf |
| :--- | :--- | :--- |
| Akkadian | Low Cobb | Sidhe |
| Cobb | Middle Kingdoms | Sindar |
| Dvergar | Nipponese | Sylvan |
| Elder | Nobb | Umbar |
| Ġarbi | Old Cobb | Wilding |
| Gurk | Oogah |  |
| Han | Ossynian |  |
| High Elvish | Queran |  |

## Speak: native speakers of Middle Kingdoms

| Average | Hard | Very Hard |
| :--- | :--- | :--- |
| Achaian | Akkadian | Ašuri |
|  | Ossynian | Cobb |
|  |  | Durgah |
|  |  | Dvergar |
|  |  | Elder |
|  |  | Garbi |
|  |  | Gurk |
|  |  | Han |


| High Drakkon | Oogah |
| :--- | :--- |
| High Elvish | Queran |
| Ilryian | Ræf |
| Low Cobb | Sidhe |
| Low Drakkon | Sindar |
| Nipponese | Sylvan |
| Nobb | Umbar |
| Old Cobb | Wilding |

## Speak: native speakers of Nipponese

| Average | Hard |
| :--- | :--- |
| Han | Achaian |
|  |  |
|  | Akkadian |
|  | Ašuri |
|  | Cobb |
|  | Durgah |
|  | Dvergar |
|  | Elder |
|  | Garbi |
|  | Gurk |


| High Drakkon | Ossynian |
| :--- | :--- |
| High Elvish | Queran |
| Ilryian | Ræf |
| Low Cobb | Sidhe |
| Low Drakkon | Sindar |
| Middle Kingdoms | Sylvan |
| Nobb | Umbar |
| Old Cobb | Wilding |
| Oogah |  |

## Speak: native speakers of Nobb

| Average | Hard | Very Hard |
| :--- | :--- | :--- |
|  | Cobb | Achaian |
|  | Low Cobb | Akkadian |
|  | Old Cobb | Ašuri |
|  | Queran | Durgah |
|  |  | Dvergar |
|  | Elder |  |
|  | Garbi |  |
|  |  | Gurk |


| Han | Ossynian |
| :--- | :--- |
| High Drakkon | Ræf |
| High Elvish | Sidhe |
| Ilryian | Sindar |
| Low Drakkon | Sylvan |
| Middle Kingdoms | Umbar |
| Nipponese | Wilding |
| Oogah |  |

## Speak: native speakers of Old Cobb

| Average | Hard | Very Hard |
| :--- | :--- | :--- |
|  | Cobb | Achaian |
|  | Elder | Akkadian |
|  | High Elvish | Ašuri |
|  | Low Cobb | Durgah |
|  | Nobb | Dvergar |
|  |  | Garbi |
|  |  | Gurk |


| Han | Ossynian |
| :--- | :--- |
| High Drakkon | Queran |
| Ilryian | Ræf |
| Low Drakkon | Sidhe |
| Middle Kingdoms | Sindar |
| Nipponese | Sylvan |
| Oogah | Umbar |

## Speak: native speakers of Oogah

| Average | Hard | Very Hard |
| :--- | :--- | :--- |
|  | Durgah | Achaian |
|  | Akkadian |  |
|  | Ašuri |  |
|  | Cobb |  |
|  | Dvergar |  |
|  | Elder |  |
|  | Garbi |  |
|  | Gurk |  |
|  | Han |  |


| High Drakkon | Ossynian |
| :--- | :--- |
| High Elvish | Queran |
| Ilryian | Ræf |
| Low Cobb | Sidhe |
| Low Drakkon | Sindar |
| Middle Kingdoms | Sylvan |
| Nipponese | Umbar |
| Nobb | Wilding |
| Old Cobb |  |

## Speak: native speakers of Ossynian

| Average | Hard | Very Hard |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Dvergar | Achaian | Ašuri | High Elvish | Queran |
|  | Akkadian | Cobb | Ilryian | Ræf |
|  | Middle Kingdoms | Durgah | Low Cobb | Sidhe |
|  |  | Elder | Low Drakkon | Sindar |
|  |  | Garbi | Nipponese | Sylvan |
|  |  | Gurk | Nobb | Umbar |
|  |  | Han | Old Cobb | Wilding |
|  |  | High Drakkon | Oogah |  |

## Speak: native speakers of Queran

Average
Hard
High Elvish
Ilryian
Nobb
Ræf
Sidhe
Sylvan
Wilding
Very Hard
Achaian
Akkadian
Ašuri
Cobb
Durgah
Dvergar
Elder

G்arbi
Gurk
Han
High Drakkon
Low Cobb
Low Drakkon
Middle Kingdoms

Nipponese Old Cobb
Oogah
Ossynian
Sindar
Umbar

## Speak: native speakers of Ræf

Average

Hard
High Elvish
Ilryian
Queran
Sidhe
Sylvan
Wilding

## Speak: native speakers of Sidhe

Average
Wilding

Hard
High Elvish Ilryian Queran
Ræf Sylvan

Very Hard
Achaian
Akkadian
Ašuri
Cobb
Durgah
Dvergar
Elder

Very Hard
Achaian
Akkadian
Ašuri
Cobb
Durgah
Dvergar

Garbi
Gurk
Han
High Drakkon
Low Cobb
Low Drakkon
Middle Kingdoms

Nipponese
Nobb
Old Cobb
Oogah
Ossynian
Sindar
Umbar

## Speak: native speakers of Sindar

| Average | Very Hard |  |  |
| :--- | :--- | :--- | :--- |
| Umbar | Achaian | Han | Old Cobb |
|  | Akkadian | High Drakkon | Oogah |
|  | Ašuri | High Elvish | Ossynian |
|  | Cobb | Ilryian | Queran |
|  | Durgah | Low Cobb | Ræf |
|  | Dvergar | Low Drakkon | Sidhe |
|  | Elder | Middle Kingdoms | Sylvan |
|  | Garbi | Nipponese | Wilding |
|  | Gurk | Nobb |  |

## Speak: native speakers of Sylvan

| Average | Hard |
| :--- | :--- |
| Ilryian | Dvergar |
|  | High Elvish |
|  | Queran |
|  | Ræf |
|  | Sidhe |
|  | Wilding |

## Speak: native speakers of Umbar

| Average | Hery Hard |
| :--- | :--- |
| Sindar | Achaian |
|  | Akkadian |
|  | Ašuri |
|  | Cobb |
|  | Durgah |
|  | Dvergar |
|  | Elder |
|  | Garbi |
|  | Gurk |


| Han | Old Cobb |
| :--- | :--- |
| High Drakkon | Oogah |
| High Elvish | Ossynian |
| Ilryian | Queran |
| Low Cobb | Ræf |
| Low Drakkon | Sidhe |
| Middle Kingdoms | Sylvan |
| Nipponese | Wilding |
| Nobb |  |

## Speak: native speakers of Wilding

| Average | Hard |
| :--- | :--- |
| Sidhe | High Elvish |
|  | Ilryian |
|  | Queran |
|  | Ræf |
|  | Sylvan |

Very Hard
Achaian
Akkadian
Ašuri
Cobb
Durgah
Dvergar

| Elder | Low Drakkon |
| :--- | :--- |
| Garbi | Middle Kingdoms |
| Gurk | Nipponese |
| Han | Nobb |
| High Drakkon | Old Cobb |
| Low Cobb | Oogah |

## Tim Doty

## Literacy: native speakers of Achaian

| Easy | Average | Hard |  | Very Hard |
| :--- | :--- | :--- | :--- | :--- |
| Achaian | Ossynian | Akkadian | Old Cobb | Ašuri |
| Middle Kingdoms |  | Cobb | Queran | Elder |
|  |  | Dvergar | Ræf | Garbi |
|  | Gurk | Sidhe | Han $\dagger$ |  |
|  | High Elvish | Sindar | High Drakkon $\ddagger$ |  |
|  | Ilryian | Sylvan | Low Drakkon |  |
|  | Low Cobb | Umbar | Nipponese |  |

## Literacy: native speakers of Akkadian

Easy
Akkadian

| Average | Hard |
| :--- | :--- |
| Achaian | Cobb |
| Garbi | Dvergar |
| Middle Kingdoms | Gurk |
| Ossynian | High Elvish |
|  | Ilryian |
|  | Low Cobb |
|  | Nobb |
|  | Old Cobb |

Hard
Cobb
Dvergar
Gurk
High Elvish
Ilryian
Low Cobb
Old Cobb

Very Hard
Ašuri
Elder
Han $\dagger$
High Drakkon $\ddagger$
Low Drakkon
Nipponese

Literacy: native speakers of Ašuri

Easy
Ašuri

Average
Hard
Achaian
Cobb
Dvergar
Gurk
High Elvish
Ilryian
Low Cobb
Low Drakkon
Middle Kingdoms

Nobb
Old Cobb
Ossynian
Queran
Ræf
Sidhe
Sindar
Sylvan
Umbar

Very Hard
Akkadian
Elder
High Drakkon $\dagger$
Garbi
Han $\dagger$
Nipponese

## Literacy: native speakers of Cobb

Easy
Cob
Low Cobb
Average
Nobb
Old Cobb

Hard
Achaian
Dvergar
Gurk
High Elvish
Ilryian
Middle Kingdoms
Ossynian
Queran

Very Hard
Akkadian
Ašuri
Elder
Garbi
Han
High Drakkon
Low Drakkon
Nipponese

Literacy: native speakers of Durgah
Easy Average
Literacy: native speakers of Dvergar

| Easy | Average | Hard |
| :--- | :--- | :--- |
| Dvergar | Ilryian | Achaian |
| Ossynian | Sylvan | Cobb |
|  |  | Gurk |
|  |  | High Elvish |
|  |  | Low Cobb |
|  |  | Middle Kingdoms |
|  |  | Nobb |
|  |  | Old Cobb |


|  | Very Hard |
| :--- | :--- |
| Queran | Akkadian |
| Ræf | Ašuri |
| Sidhe | Elder |
| Sindar | Ġarbi |
| Umbar | Han |
|  | High Drakkon |
|  | Low Drakkon |
|  | Nipponese |

Literacy: native speakers of Elder

Easy
Elder

Average
High Elvish
Old Cobb

Hard
Achaian
Cobb
Dvergar
Gurk
Ilryian
Low Cobb
Middle Kingdoms
Nobb
Ossynian

Old Cobb
Ossynian
Queran
Ræf
Sidhe
Sindar
Sylvan
Umbar
Nobb

| Achaian | Old Cobb |
| :--- | :--- |
| Cobb | Ossynian |
| Dvergar | Queran |
| Gurk | Ræf |
| High Elvish | Sidhe |
| Ilryian | Sindar |
| Low Cobb | Sylvan |
| Middle Kingdoms | Umbar |
| Nobb |  |

Hard

High Elvish
Low Cobb
Middle Kingdoms
Old Cobb

Very Hard
Akkadian
Ašuri
Elder
Garbi
Han
High Drakkon
Low Drakkon
Nipponese

Very Hard
Akkadian
Ašuri
Elder
Garbi
Han
High Drakkon
Low Drakkon
Nipponese

Very Hard
Akkadian
Ašuri
Ġarbi
Han
High Drakkon
Low Drakkon
Nipponese

Literacy: native speakers of Ġarbi
Easy
Garbi
Average
Akkadian
Hard
Achaian
Cobb
Dvergar
Gurk
High Elvish
Ilryian
Low Cobb
Middle Kingdoms
Nobb
Old Cobb
Ossynian
Queran
Ræf
Sidhe
Sindar
Sylvan
Umbar

## Tim Doty

## Literacy: native speakers of Gurk

| Easy | Average | Hard |  |
| :--- | :--- | :--- | :--- |
| Gurk | Low Cobb | Achaian | Ossynian |
|  |  | Cobb | Queran |
|  | Dvergar | Ræf |  |
|  | High Elvish | Sidhe |  |
|  | Ilryian | Sindar |  |
|  | Middle Kingdoms | Sylvan |  |
|  | Nobb | Umbar |  |
|  |  | Old Cobb |  |

## Literacy: native speakers of Han

Easy

| Average | Hard |
| :--- | :--- |
| Han | Achaian |
| Nipponese | Cobb |
|  | Dvergar |
|  | Gurk |
|  | High Elvish |
|  | Ilryian |
|  | Low Cobb |
|  | Middle Kingdoms |
|  | Nobb |

Old Cobb
Ossynian
Queran
Ræf
Sidhe
Sindar
Sylvan
Umbar

## Literacy: native speakers of High Drakkon

| Easy | Average | Hard | Very Hard |
| :--- | :--- | :--- | :--- |
|  | Low Drakkon | Achaian | Nobb |

## Literacy: native speakers of High Elvish

| Easy | Average | Hard |
| :--- | :--- | :--- |
| High Elvish | Ilryian | Achaian |
|  | Old Cobb | Cobb |
|  | Queran | Dvergar |
|  | Ræf | Elder |
|  | Sidhe | Gurk |
|  | Sylvan | Low Cobb |

Literacy: native speakers of Ilryian

| Easy | Average | Hard |  |
| :--- | :--- | :--- | :--- |
| Ilryian | Dvergar | Achaian | Sindar |
| Sylvan | High Elvish | Cobb | Umbar |
|  | Queran | Gurk |  |
|  | Ræf | Low Cobb |  |
|  | Sidhe | Middle Kingdoms |  |
|  |  | Nobb |  |
|  |  | Old Cobb |  |
|  |  | Ossynian |  |

## Literacy: native speakers of Low Cobb

| Easy | Average |
| :--- | :--- |
| Cobb | Gurk |
| Low Cobb | Nobb |
|  | Old Cobb |


| Hard |  |
| :--- | :--- |
| Achaian | Sidhe |
| Dvergar | Sindar |
| High Elvish | Sylvan |
| Ilryian | Umbar |
| Middle Kingdoms |  |
| Ossynian |  |
| Queran |  |
| Ræf |  |

Very Hard
Akkadian
Ašuri
Elder
Ġarbi
Han
High Drakkon
Low Drakkon
Nipponese

## Literacy: native speakers of Low Drakkon

| Easy | Average | Hard | Very Hard |
| :--- | :--- | :--- | :--- |
| Low Drakkon | Achaian | Nobb | Akkadian |
|  | Ašuri | Old Cobb | Elder |
|  | Cobb | Ossynian | Garbi |
|  | Dvergar | Queran | Han |
|  | Gurk | Ræf | High Drakkon |
|  | High Elvish | Sidhe | Nipponese |
|  | Ilryian | Sindar |  |
|  | Low Cobb | Sylvan |  |
|  | Middle Kingdoms | Umbar |  |

Literacy: native speakers of Middle Kingdoms

| Easy | Average | Hard |  | Very Hard |
| :--- | :--- | :--- | :--- | :--- |
| Achaian | Ossynian | Akkadian | Old Cobb | Ašuri |
| Middle Kingdoms |  | Cobb | Queran | Elder |
|  |  | Dvergar | Ræf | Garbi |
|  | Gurk | Sidhe | Han |  |
|  | High Elvish | Sindar | High Drakkon |  |
|  | Ilryian | Sylvan | Low Drakkon |  |
|  | Low Cobb | Umbar | Nipponese |  |

## Tim Doty

Literacy: native speakers of Nipponese

| Easy | Average | Hard | Very Hard |
| :--- | :--- | :--- | :--- |
| Nipponese | Achaian | Nobb | Akkadian |
|  | Han | Old Cobb | Ašuri |
|  | Cobb | Ossynian | Elder |
|  | Dvergar | Queran | Ġarbi |
|  | Gurk | Ræf | High Drakkon |
|  | High Elvish | Sidhe | Low Drakkon |
|  | Ilryian | Sindar |  |
|  | Low Cobb | Sylvan |  |
|  | Middle Kingdoms | Umbar |  |

Literacy: native speakers of Nobb
Easy
Nobb
Average
Cobb
Low Cobb
Old Cobb
Queran

Hard
Achaian
Dvergar
Gurk
High Elvish
Ilryian
Middle Kingdoms
Ossynian
Ræf

## Literacy: native speakers of Old Cobb

| Easy | Average |
| :--- | :--- |
| Old Cobb | Cobb |
|  | High Elvish |
|  | Low Cobb |
|  | Nobb |


| Hard |  |
| :--- | :--- |
| Achaian | Queran |
| Elder | Ræf |
| Dvergar | Sidhe |
| Gurk | Sindar |
| Ilryian | Sylvan |
| Middle Kingdoms | Umbar |
| Ossynian |  |

Very Hard
Akkadian
Ašuri
Gärbi
Han
High Drakkon
Low Drakkon
Nipponese

Literacy: native speakers of Oogah
Easy
Average
Hard
Achaian
Cobb
Dvergar
Gurk
High Elvish
Ilryian
Low Cobb
Middle Kingdoms
Nobb
Old Cobb
Ossynian
Queran
Ræf
Sidhe
Sindar
Sylvan
Umbar

Very Hard
Akkadian
Ašuri
Elder
Garbi
Han
High Drakkon
Low Drakkon
Nipponese

Literacy: native speakers of Ossynian

| Easy | Average | Hard |  | Very Hard |
| :--- | :--- | :--- | :--- | :--- |
| Dvergar | Achaian | Akkadian | Queran | Ašuri |
| Ossynian | Middle Kingdoms | Cobb | Ræf | Elder |
|  |  | Gurk | Sidhe | Giarbi |
|  |  | High Elvish | Sindar | Han |
|  |  | Ilryian | Sylvan | High Drakkon |
|  |  | Low Cobb | Umbar | Low Drakkon |
|  |  | Nobb |  | Nipponese |

## Literacy: native speakers of Queran

| Easy | Average |
| :--- | :--- |
| Queran | High Elvish |
|  | Ilryian |
|  | Nobb |
|  | Ræf |
|  | Sidhe |
|  | Sylvan |

Hard
Achaian
Cobb
Dvergar
Gurk
Low Cobb
Middle Kingdoms
Old Cobb
Ossynian

Very Hard
Sindar
Umbar
Akkadian
Ašuri
Elder
Ġarbi
Han
High Drakkon
Low Drakkon
Nipponese

## Literacy: native speakers of Ræf

| Easy | Average |
| :--- | :--- |
| Ræf | High Elvish |
|  | Ilryian |
|  | Queran |
|  | Sidhe |
|  | Sylvan |

Hard
Achaian
Cobb
Dvergar
Gurk
Low Cobb
Middle Kingdoms
Nobb
Old Cobb

Ossynian Akkadian
Sindar Ašuri
Umbar Elder
Garbi
Han
High Drakkon
Low Drakkon
Nipponese

## Literacy: native speakers of Sidhe

Easy
Average
High Elvish
Ilryian
Queran
Ræf
Sylvan
Hard
Achaian
Cobb
Dvergar
Gurk
Low Cobb
Middle Kingdoms
Nobb
Old Cobb

Very Hard
Akkadian
Ašuri
Elder
Ġarbi
Han
High Drakkon
Low Drakkon
Nipponese

## Tim Doty

Literacy: native speakers of Sindar

| Easy | Average | Hard | Very Hard |
| :--- | :--- | :--- | :--- |
| Sindar | Achaian | Nobb | Akkadian |
| Umbar | Cobb | Old Cobb | Ašuri |
|  | Dvergar | Ossynian | Elder |
|  | Gurk | Queran | Garbi |
|  | High Elvish | Ræf | Han |
|  | Ilryian | Sidhe | High Drakkon |
|  | Low Cobb | Sylvan | Low Drakkon |
|  | Middle Kingdoms |  | Nipponese |

## Literacy: native speakers of Sylvan

| Easy | Average | Hard |
| :--- | :--- | :--- |
| Ilryian | Dvergar | Achaian |
| Sylvan | High Elvish | Cobb |
|  | Queran | Gurk |
|  | Ræf | Low Cobb |
|  | Sidhe | Middle Kingdoms |
|  |  | Nobb |
|  |  | Old Cobb |
|  |  | Ossynian |

Sindar
Umbar

Very Hard
Akkadian
Ašuri
Elder
Garbi
Han
High Drakkon
Low Drakkon
Nipponese

Very Hard
Akkadian
Ašuri
Elder
Garbi
Han
High Drakkon Low Drakkon
Nipponese

Literacy: native speakers of Wilding

Easy
Sidhe
Average
High Elvish
Ilryian
Queran
Ræf
Sylvan

Hard
Achaian
Cobb
Dvergar
Gurk
Low Cobb
Middle Kingdoms
Nobb
Old Cobb

Very Hard
Akkadian
Ašuri
Elder
Ġarbi
Han
High Drakkon
Low Drakkon
Nipponese


[^0]:    Incubation + 6 hours
    Condition: $L O E \geq 1$ (success)

[^1]:    * Armor counts half normal against this attack
    $\dagger$ Refers to CON, not STR
    $\mp$ Has a top-mounted gravity-fed magazine holding 24 quarrels, lever action reloads with a single action

