## Ivali

Ivali (short for Ivalinalu) is the version of Castithan poker played on Earth. It uses a set of cards native to Votanis, but the old rules have merged with Earth poker rules to produce a kind of hybrid poker-like betting game. This document details the rules and probabilities for the game.

## Introduction

Back when they were still in the Votan System, Castithans had a card game that was based on their imperial past, when they set out to conquer the galaxy. The cards were based on the colonized planets in the known universe and the resources that could be mined from them. When the Votans came to Earth, they brought their card game with them, but as it came to be used by humans, the game underwent some changes-e.g. the symbol for Casti (the new world colonized by the Castithans) was changed to Earth, as a representation of the new new world, and since Votan resources were unfamiliar to humans, they changed them to the four elements, since the symbols looked somewhat iconic, and it made more sense to human players. The end result was a hybrid deck of cards used to play hybrid games on Earth.

## Card Types

A full deck of cards has 100 regular cards, 25 elemental wild cards and 4 infinity wild cards (not all games will use all of these cards), for a total of 129 cards. Each card will have one of a number of symbols on it (not all games will make use all of these symbols). This is a summary of them:

| Numbers | Each card has an English and Castithan numeral (1 <br> through 5) in its extreme corners. Infinity wild cards will <br> have the 0 radical in their number slot (two red dots). |
| :---: | :--- |
| Planets | Each card has one symbol associated with a planet in the <br> upper-left corner of the card. There are five planets: Earth, <br> Irath, Omec, Libera and Gula. Infinity wild cards will not <br> have a planet. In addition, the card background color will <br> match the color of the planet on the card. |


| Elements | Each card has one symbol associated with an element in <br> the lower right-hand corner of the card. There are four <br> elements: Earth, Fire, Air and Water. There are also cards <br> that have a wild element. The wild element symbol is the <br> 0 radical. Infinity wild cards will not have an element. |
| :--- | :--- |

A sample card is shown below (key below image):

A. English numeral.
B. Castithan numerals (same as English numeral).
C. Planet symbol (above, Irath).
D. Element symbol (above, Earth).

Though cards can be used in any way, the short side with the planet symbol in the upper left-hand corner is conventionally considered (and referred to as) the top of the card.

## Shenja Ivali

One popular variant of Ivali is called Shenja Ivali (or Greedy Ivali). This variant is most often played without any wild cards (neither the infinity wild cards nor the elemental wild cards). Shenja Ivali is a multi-phase betting game designed to allow large sums of money to change hands after every single round. In Shenja Ivali, players are trying to create the best five card hand they can.

## STARTING THE GAME

Shenja Ivali is played with at least two players, and can have as many as can be dealt in, but a usual group is anywhere from four to eight (as with a game of poker). If large numbers of players are wanted, multiple decks can be used. Each player should have a sufficient stack of chips to participate for several rounds. One player is selected as the dealer, with the deal passing to the initial dealer's left after each round (a dealer token can be used to aid players' memories). While the game can be played with blinds, an ante from all players is more common, as a player's odds can't adequately be determined after the cards are first dealt.

## PHASE 1: THE DEAL

The dealer deals out four cards face down to each player who has anted, starting with the player to their left. Once the hand is dealt, players are allowed to pick up their cards. As with poker, it's not considered wise to show one's cards to another player. Once players have evaluated their hands there is an initial round of betting. Players may fold in lieu of betting.


## PHASE 2: THE FLOP

The next phase of the game involves a fifth card being revealed. Borrowing terminology from Earth's Texas Hold 'Em, this is called the flop. The dealer deals one card for each remaining player (four cards if there are four players, five if there are five, etc.) face up to the middle of the table. Ideally, the dealer should deal these cards in a straight line extending from the dealer to the opposite end of the table, but standard dealing can be done if space won't allow for this. At the end of phase 3, each player who hasn't folded will receive one of these cards, but at this stage they don't know which card they will receive. Players engage in another round of betting (speculating on which card they will receive) before moving on to the next phase. Players may fold in lieu of betting.


## PHASE 3: THE DISCARD/DRAW PHASE

Having seen the cards made available via the flop, players may now examine their hand and decide if they would like to discard any cards in their hand. This decision will be informed by which card a player thinks they will receive from the flop (for which, see Phase 4: The Auction). A player may discard up to (but no more than) two cards from their hand, receiving replacement cards from the dealer in exchange for the discarded cards. As with similar game elements, the player to the dealer's left has the first opportunity to discard cards and receive replacements. A player does not have to discard any cards if they're satisfied with their hand.

After each player has received their new cards, there is another round of betting before proceeding to Phase 4.

## SAMPLE GAME: PHASE 3 DETAIL

## PLAYER B'S HAND



## PHASE 4: THE AUCTION

In order to form a five card hand, each player needs five cards. In phase 4, each player has the option to bid on one of the cards revealed in the flop to add to their hands. Bidding begins to the dealer's left. Each player may bid once and only once. They may bid any amount of money, or pass. If all players pass, flop cards are passed out starting to the dealer's left in the order in which they're dealt. (For example, using our sample game, if there are no bids, Player A will receive the Gulani 3 of Fire; Player B will receive the Omec 5 of Air; Player C will receive the Irath 2 of Earth; and Player D [the dealer] will receive the Gulani 3 of Earth.)

If a player elects to bid, they will receive the card they bid on if they're the highest bidder. If only one player bids on a card, they will receive the card, no matter the amount they bid. If two or more players bid on the same card, the highest bid will win the card. If a player is outbid, they will have a chance to outbid the highest bid on the card. If they fail to outbid the highest bid, they will lose the card, and will regain their bid. They will no longer have the option of bidding on any other card.

Once bids have finished, the dealer passes out cards, ensuring that each card goes to its highest bidder. If certain players failed to bid, they will receive a card after cards that have been bid on have been passed out. Again, remaining cards will be passed out starting to the left of the dealer in the order in which they were dealt. Winning bids remain in the center of the table. The final round of betting follows.

SAMPLE GAME: PHASE 4 DETAIL


Explanation: In this example, Player $A$ bid 1 chip on the Gulani 3 of Fire. Player B beat that with 2 chips, and Player C beat that with 3. Player B has elected not to challenge, and so will lose the card and ultimately retain their bid. Player B has outbid Player C by 1 chip. If Player $C$ elects not to raise to at least 5, they will lose the card, and retain their bid.

## SAMPLE GAME: PHASE 4 CLOSE



Note that each player now has five cards. In the center, the winning bid on the Gulani 3 of Fire is retained, while the losing bids were returned to the stacks of Players $A$ and $C$. Player D bid 1 chip on the Irath 2 of Earth since, otherwise, they would have received the Omec 5 of Air. That bid also remains in the center. This becomes the pot.



## PHASE 5: THE REVEAL

With final bets in place, all that's left is for each player to reveal what they have. Starting with the player to the dealer's left, each player reveals what they have in their hand. At this stage, one should make reference to the table of probabilities below to determine which hand wins out over which hand. Once a winner is determined, the winner gets all antes and bets, and whatever's in the pot (i.e. what was bid for flop cards). In the unlikely event of a tie, it's up to the players to determine (beforehand) if planets and elements will be ranked (they need not be). Larger numbers outrank smaller numbers as expected. By default, the planets and elements are ranked as follows:

| Elements | Earth $>$ Water $>$ Fire $>$ Air |
| :---: | :--- |
| Planets | Earth $>$ Irath $>$ Libera $>$ Gula $>$ Omec |

As a result, if two players have a flush (i.e. all the same element) and a straight and a non-winning assortment of planets, a player with a flush of Water will beat a player with a flush of Fire. These rankings are, of course, arbitrary, and are not likely to be accepted by all players. For example, the reason that Earth outranks all the other planets is because it used to be Casti (and this being a Castithan game, Castithans had Casti outranking all other planets). Some players rank Earth last, since it's the most recently discovered planet. This, naturally, can lead to arguments amongst players.

After the winnings have been distributed, the deal passes to the player on the left, and play continues.

## SAMPLE GAME: PHASE 5



Hand: Player A has a full house (Earth Rising) and three of a kind (3's).

## SAMPLE GAME: PHASE 5 (CONTINUED)

## PLAYER B'S HAND



Hand: Player B has a straight flush (Fire) and 1 pair (Liberata).
PLAYER C'S HAND


Hand: Player C has five of a kind (3's) and one pair (Earth).

## PLAYER D'S HAND



Hand: Player D has two sets of four of a kind (2's and Irath).

Given the above set of hands, Player B has won this round.

## Hand Probabilities (Shenja Ivali)

Below is a table listing (in order) every possible hand for Shenja Ivali. The probabilities correspond to which hands beats which hand head-to-head (with the weakest hand at the bottom and the best hand at the top).

## Key

- $\mathrm{FL}=$ Flush (all of the same element)
- $S=$ Straight (the numerals $1-5$, or one of each planet)
- $\mathrm{FH}=$ Full House (three of a kind and a pair of either planets or numerals)
- $2 \mathrm{P}=$ Two Pairs (numerals or planets)
- $1 \mathrm{P}=$ One Pair (numerals or planets)
- 5 = Five of a kind (numerals or planets)
- $4=$ Four of a kind (numerals or planets)
- $3=$ Three of a kind (numerals or planets)
- \# = Numbers
- PL = Planets

| Hand | Probability | Name |
| :---: | :--- | :--- |
| $\mathbf{5}+\mathbf{S}+\mathbf{F L}$ | $0.000012 \%$ | Royal Eclipse |
| $\mathbf{4}+\mathbf{S}+\mathbf{F L}$ | $0.00031 \%$ | Solar Eclipse |
| $\mathbf{S}+\mathbf{S}+\mathbf{F L}$ | $0.0005 \%$ | Arkfall |
| $\mathbf{S}+\mathbf{F H}+\mathbf{F L}$ | $0.00067 \%$ | Clean House \{Burning/Drowning/Buried/Flying\} |
| $\mathbf{S}+\mathbf{3}+\mathbf{F L}$ | $0.0022 \%$ | Lunar Eclipse |
| $\mathbf{5}+\mathbf{4}$ | $0.0026 \%$ | Ponu |
| $\mathbf{4 + 1 P}+\mathbf{F L}$ | $0.0029 \%$ | Hail Irzu |
| $\mathbf{S}+\mathbf{2 P}+\mathbf{F L}$ | $0.0034 \%$ | Twin Stars |
| $\mathbf{5}+\mathbf{S}$ | $0.0043 \%$ | Slide |
| $\mathbf{F H}+\mathbf{2 P}+\mathbf{F L}$ | $0.0046 \%$ | Pear House \{Burning/Drowning/Buried/Flying\} |
| $\mathbf{S}+\mathbf{1 P}+\mathbf{F L}$ | $0.0048 \%$ | Shooting Stars |
| $\mathbf{5}+\mathbf{F H}$ | $0.0058 \%$ | Mansion |


| Hand | Probability | Name |
| :---: | :---: | :---: |
| FH + 1P + FL | 0.0065\% | Mother-in-Law Cottage |
| $3+3+\mathrm{FL}$ | 0.0092\% | Double Tree \{Burning/Drowning/Buried/Flying\} |
| $3+2 P+F L$ | 0.015\% | Pear Tree \{Burning/Drowning/Buried / Flying\} |
| $5+3$ | 0.018\% | Jamboree |
| $3+1 P+F L$ | 0.021\% | A Tree and a Pair \{Burning/Drowning/Buried / Flying\} |
| $2 P+2 P+F L$ | 0.023\% | Game Winner |
| $5+2 \mathrm{P}$ | 0.029\% | Wedding Party |
| $2 P+1 P+F L$ | 0.033\% | Pombanu |
| $5+1 P$ | 0.04\% | Sensoth Party |
| 1P + 1P + FL | 0.046\% | Liberata's Luck |
| $4+4$ | 0.066\% | Double Squad |
| $4+S$ | 0.11\% | Dashing Straight |
| $4+\mathrm{FH}$ | 0.15\% | Quad House |
| S + S | 0.18\% | Migration |
| S + FH | 0.24\% | Clean House |
| FH + FH | 0.33\% | Double Houses |
| $4+3$ | 0.47\% | A Quad and a Tree |
| $4+2 \mathrm{P}$ | 0.74\% | A Quad and Two Pair |
| S + 3 | 0.77\% | Running Straight |
| $4+1 P$ | 1.04\% | A Quad and a Pair |
| FH + 3 | 1.04\% | Tree House |
| S + 2P | 1.21\% | Trotting Straight |
| FH + 2P | 1.65\% | Pear House |


| Hand | Probability | Name |
| :---: | :--- | :--- |
| $\mathbf{S}+\mathbf{1 P}$ | $1.71 \%$ | Walking Straight |
| $\mathbf{F H}+\mathbf{1 P}$ | $2.32 \%$ | A Full house and a Pair |
| $\mathbf{3 + 3}$ | $3.3 \%$ | Double Tree |
| $\mathbf{3 + 2 P}$ | $5.22 \%$ | Pear Tree |
| $\mathbf{3 + 1 \mathbf { 1 }}$ | $7.33 \%$ | A Tree and a Pair |
| $\mathbf{2 P}+\mathbf{2 P}$ | $8.28 \%$ | Field Goal |
| $\mathbf{2 P}+\mathbf{1 P}$ | $11.61 \%$ | A Set and a Pair |
| $\mathbf{1 P}+\mathbf{1 P}$ | $16.29 \%$ | Gachika |

## Future Updates

This is only one possible game that can be played with this set of cards. You could even play Go Fish with them. As future games or game styles are added, they will be appended to this end of this document. Thanks for reading!

