

# Remainder Islands™ Highlights

**PAWN MOVEMENT & DOCKING:** Upon finding a path a player points to the triangles that compose the path, counts **ALoud** the triangles that compose the path for the opponent to hear, and after pointing and counting the final triangular space, places the pawn on the last triangular step adjoining the island (docking).

**Note:** Whenever a remainder is obtained, a player must dock the pawn.

**ANNOUNCING THE NUMBER SENTENCE:** The player must announce the dividend, divisor, and remainder of the chosen division problem before moving a piece or removing chips.

**PASSING A TURN:** If a player is unable to set sail or does not wish to set sail, the player passes the flag card to end the turn.

**ZERO REMAINDER OPTIONS:** If the quotient is **ONE OR GREATER** with a remainder of zero, the player may choose the following options: 1) the player's pawn may be moved and it does not have to land on a triangular space adjoining an island; 2) the opponent's pawn may be moved and it does not have to land on a triangular space adjoining an island; 3) the opponent's chip(s) may be removed from any ONE island based on the following conditions: a) if the quotient is less than 20, one chip may be removed; b) if quotient is less than 30 but greater than or equal to 20, 2 chips may be removed; or c) if quotient is equal to or greater than 30, 3 chips may be removed.

**Note:** All removed chips must be from the same island and the opposing player must have at least the number of chips specified.

**REMOVED CHIPS:** Removed chips are returned to the opponent.

**ZERO QUOTIENT/NON-ZERO REMAINDER:** If a player's pawn is on a triangle adjacent to an island that does **NOT** contain any of the player's chips and if the player constructs a division problem with a quotient of zero and a non-zero remainder, the player may move zero and deposit the number of chips indicated by the remainder. (Eg. 7 divided by 8)

**ROUND GAME:** The beginning and second player complete a turn.

**BEGINNING OF TURN:** A player's turn begins upon receiving the flag card.

**END OF TURN:** A player's turn ends when the player passes the flag card to the opponent and releases hold of it.

**END OF GAME:** When a player has chips on all 6 islands and the second player has been allowed to complete the round, the game ends. **THE OFFICIAL ANNOUNCES END OF GAME.**

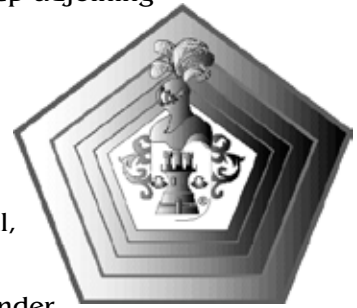
**WIN:** The player having the greatest number of chips when the game has ended wins the game. **THE OFFICIAL COUNTS THE CHIPS AND ANNOUNCES THE WIN.**

**TIE:** If both player's have the same number of chips, **THE OFFICIAL ANNOUNCES THE TIE.**

**CHALLENGES:** A player may issue a challenge upon receiving the flag card and **BEFORE** picking up the dice. If **CORRECT**, the official returns board to prior status and the the challenger removes 3 or fewer of the opponent's chips from a selected island and returns them to the opponent. If **INCORRECT**, the challenged player removes 3 or fewer of the challenger's chips from a selected island, returns them to the challenger, and the challenger forfeits a turn and passes the flag card to the challenged player.

**GAME TIME LIMIT:** After completing a round, the player with the greater number of chips is declared the winner by the official.

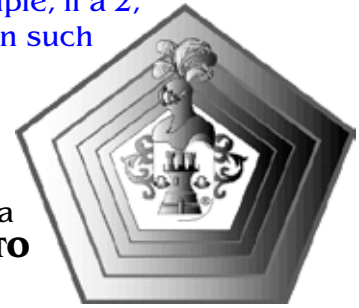
**NOTE:** If a player forgets to pass the flag card, the supervisor reminds the player to do so. This is not treated as a challenge situation, but rather a time issue. In a similar manner, if a player starts a turn before the opposing player has passed the flag card, then the supervisor reminds the player that the opposing player is still taking a turn and does not deal with this as a challenge situation.



# Prime Gold™ Highlights

**WRITING THE NUMBER SENTENCE:** A player must write the number sentence before completing a turn. **The order of operations must be used.** (The operations of multiplication and division precede the operations of addition and subtraction.) For example, if a 2, 5, and 6 were rolled many possible number sentences could be written such as  $2 \times 5 + 6 = 60$ , or  $(2 + 5) \times 6 = 42$ .

**SHAFTS OF 5 OR MORE CHIPS:** Any two of an opponent's chips are removed when a player constructs a row or column of 5 chips. Any three of an opponent's chips are removed when a player constructs a row/column of 6 or greater chips. **THESE CHIPS ARE RETURNED TO THE OPPONENT.**



## **PRIME GOLD VEINS:**

**Vein of 3:** remove one chip on composite number and give back to opponent

**Vein of 4:** remove 2 chips on composite numbers and return to opponent - 2 of player's chips may be placed onto the composite numbers that were covered by removed chips

**Vein of 5:** same as vein of 4 but also remove one chip which cover a prime number and return this chip to opponent

**ANNOUNCING FOR GOLDBACH'S DOUBLE PRIME PLACEMENT:** In addition to writing the number sentence, the player must also announce (state) the 2 prime numbers which sum to the value constructed with the die **BEFORE** completing a turn.

**ROUND GAME:** The beginning and second player complete a turn.

**BEGINNING A TURN:** A player's turn begins upon receiving the flag card.

**END OF TURN:** A player's turn ends when the player passes the flag card to the opponent and releases hold of it. (Note: Dice are not passed from player to player, only the flag card.)

**WIN:** To win, a player must be the only player at the end of a round who has 1) constructed one continuous path of chips from top to bottom or from side to side of the gameboard **OR** 2) mined four veins of prime gold (four veins of three or more chips covering prime number in an unbroken straight diagonal line.)

**TIE:** If both players construct a winning situation at the end of a round and properly announce it, the official declares a tie.

**CHALLENGES:** A player may issue a challenge upon receiving the flag card and **BEFORE** picking up the dice. If **CORRECT**, the official restores game to prior status and challenger begins a turn. If **INCORRECT**, the challenger forfeits a turn and passes flag card to the challenged player.

**DECLARING A WIN:** A win must be announced **BEFORE** releasing hold of the flag card to end a turn. A player may also pass the flag card to the official and announce a win. If the beginning player announces a win, the second player is allowed to complete the round. If both players construct a win and properly announce it, the official declares a **TIE**.

**NOTE:** If a player forgets to pass the flag card, the supervisor reminds the player to do so. This is not treated as a challenge situation, but rather a time issue. In a similar manner, if a player starts a turn before the opposing player has passed the flag card, then the supervisor reminds the player that the opposing player is still taking a turn and does not deal with this as a challenge situation.

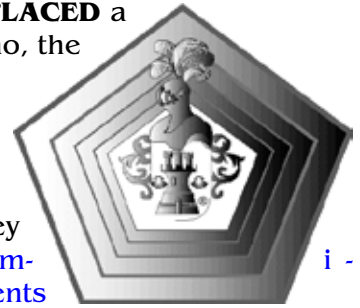
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# Pent 'Em In™ Highlights

**PHASE I: INITIAL PLACEMENT:** No pentomino may be placed over the shaded squares of the gameboard. Also, a pentomino may **NOT** be placed so that it shares a common edge with the opponent's pentomino. If a player **PICKS UP** a piece and cannot place it, but finds another piece that will work, the player may select another piece. If a player has already **PLACED** a piece, it **CANNOT** be changed. If a player cannot place the fifth pentomino, the player forfeits the game.

**Note:** The official assures that each player has placed exactly 5 pentominoes onto the gameboard. No sixth pentomino is allowed to be placed.

**PHASE II: MOVEMENT:** Pentominoes may now be moved so that they share a common edge with the opponent's pentominoes. **A pentomino may be slid, flipped, OR rotated, but no combinations of these movements can be made within a turn.** Pentomino pieces may be flipped or rotated over chips, shaded squares, or parts of another pentomino. They may **NOT** be slid over spaces occupied by chips or pentominoes or over the gameboard's shaded squares.



**CHIP MOVEMENT:** **After the Placement Phase**, chips may be moved. A chip may **NOT** be slid through or placed on the shaded squares.

**MOVE IT-USE IT:** Once a player has moved a piece from its position, that piece must be moved to complete a turn.

**NO THREE CONSECUTIVE MOVES OF THE SAME PENTOMINO:** A player may **NOT** move the same pentomino 3 consecutive times, even if interspersed with a chip movement. To do so results in loss of game.

**NO CONSECUTIVE CHIP MOVEMENTS ALLOWED:** A player may not move the same chip in two consecutive turns. If a chip has been moved during one turn, the player must move a pentomino in the next move.

## **UNOCCUPIED STARTING CIRCLES MAY BE COVERED OR MOVED THROUGH**

**BEGINNING OF TURN:** A player's turn begins upon receiving the flag card.

**END OF TURN:** A player's turn ends when the player passes the flag card to the opponent and releases hold of it.

**CONCEDING A LOSS:** A player wins when the opponent concedes that all 5 of the opponent's pentominoes are entrapped and can not be moved. A player also wins when 4 of the opponent's pentominoes are entrapped and the opponent has already moved the fifth pentomino twice (with possible intermittent chip movement).

**CHALLENGES:** A player may issue a challenge upon receiving the flag card and **BEFORE** touching a pentomino or chip for movement or placement. If **CORRECT**, the official implement the actions in rules 2f, 5, and 14. For other challenges the official restores the board to prior status and the challenger begins a turn. If **INCORRECT**, the challenger forfeits a turn and passes the flag card to the challenged player.

**CHALLENGING INITIAL PLACEMENT:** (same timing as above and challenger must identify incorrectly placed pentominoes) If **CORRECT**, the official removes the last pentomino placed and allows the challenger to select another pentomino of the opponent's and place it onto the gameboard. After the official checks the correct placement of this piece, the challenger begins a turn. (A player forfeits the game if unable to place the fifth pentomino.) If **INCORRECT**, the challenged player may move one of the challenger's chips to a new location and the challenger begins a turn.

**NOTE:** If a player forgets to pass the flag card, the supervisor reminds the player to do so. This is not treated as a challenge situation, but rather a time issue. In a similar manner, if a player starts a turn before the opposing player has passed the flag card, then the supervisor reminds the player that the opposing player is still taking a turn and does not deal with this as a challenge situation.

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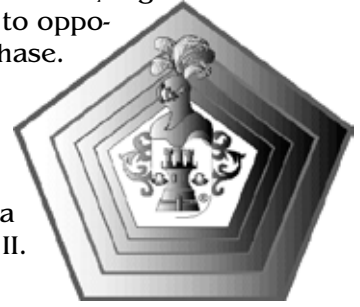
# Fraction Pinball™ Highlights

## PHASE I: PINBALL PLACEMENT

**Procedure for Placing Pinballs:** After pinball lands onto the first fraction circle, a player states the decimal equivalent of the fraction, adds this value to the accumulated score on the score/flag card, announces the new accumulated score, and passes the score/flag card to opponent to end the turn. Pinballs may not enter negative fraction circles in this phase.

**PHASE II: BLOCKING CHIP MOVEMENT:** Only blocking chips are placed and cannot be moved a second time. Pinballs cannot be moved at this time.

**PHASE III: PINBALL OR BLOCKING CHIP MOVEMENT:** Player can move a pinball or blocking chip according to same procedures used in Phases I and II. Pinballs may now enter negative fraction circles.



**NEUTRALIZATION:** During Phase III a player may neutralize an opponent's blocking chip by moving one of the player's blocking chips along a path containing fraction circles onto a node occupied by an opponent's blocking chip. This chip in effect becomes neutralized. (The blocking chip may **NOT** be moved directly from one node (or the starting circle) to another to neutralize an opponent's chip.) The chip belonging to the player making the neutralization move should be on top of the stack. A player may choose to neutralize an opponent's chip and leave the stack of two chips on that node Or, the player may move the stack of chips to the start circle provided no other chip(s) occupy that position. No more than two chips may be stacked on any node or the start circle.

**Note:** Only the top blocking chip of a neutralized stack may be moved within a turn.

**CENTER PENTAGON:** A player may **NOT** change the direction of movement of a pinball or blocking chip at the center pentagon.

**MOVE IT-USE IT:** Once a player has moved a piece off its space, that piece must be moved to complete a turn.

**BEGINNING OF TURN:** A player's turn begins upon receiving the score/flag card.

**END OF TURN:** A player's turn ends when the player passes the score/flag card to the opponent and releases hold of it.

**WIN:** A player may win based on any of the following conditions: a) being the first to identify an accumulated score between 4.95 and 5.05; b) when the opponent is unable to move either of their pinballs or is unable to neutralize a chip blocking one of their pawns **and** move that stack of chips back to the Start Circle; c) if, at the beginning of a turn the score is between 4.95 and 5.05 and the opponent has not declared a win; or d) if at the beginning of a turn the score is less than 1.5 or greater than 8.5 in Phase III. Condition b is the only situation where the official declares the win.

**CHALLENGES:** A player may issue a challenge upon receiving the score/flag card and **BEFORE** touching a pinball or blocking chip for movement. If the challenge is **CORRECT**, the official restores gameboard and score (if changed) to prior status. The challenger then takes the opponent's turn with the piece(s) that had been moved. After completing the opponent's turn, the challenger then completes a regular turn. If the challenge is **INCORRECT**, the challenged player takes the opponent's turn and then completes a regular turn.

**Note:** A player must take the opponent's turn in Phases I and II. However, if a player does not wish to take the opponent's turn in Phase III, the player may only complete a regular turn.

**NOTE:** If a player forgets to pass the score/flag card, the supervisor reminds the player to do so. This is not treated as a challenge situation, but rather a time issue. In a similar manner, if a player starts a turn before the opposing player has passed the score/flag card, then the supervisor reminds the player that the opposing player is still taking a turn and does not deal with this as a challenge situation.

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# Frac Fact™ Highlights

**MATERIALS:** Paper and pencil may only be used for the operations of multiplication and division.

**Note:** One copy of each of the zero and whole strips are removed for tournament play.

**TOUCH & ANNOUNCE:** Before removing the fraction bars from the gameboard, the player must 1) touch the 3 fraction strips forming the trick; and 2) announce the arithmetic sentence after touching the 3 strips; and 3) pick up the 3 strips that form the trick and place them into a scoring pile to the right of the player.

**Note:** Equivalent expressions for the fraction strip representations can be used in stating an arithmetic sentence. However, equivalent expressions must be limited to the partitions of the fraction strips used in the game, i.e. halves, thirds, fourths, sixths, or twelfths.



**TOUCH-TAKE:** Once a player has touched one of the 5 bars in the player's hand, it must be used to form a trick. Any touched bar not used to form a trick must be removed and placed onto the player's discard pile. The player then replenishes the hand and completes a turn.

**REPLENISHING A HAND:** A player has the first 30 seconds of a turn to replenish one to five strips from a hand.

**PASSING A TURN:** When unable to form a trick, a player may pass the flag card to the opponent and end the turn.

**FORCED DISCARD:** Should an opponent pass a turn (see above) without discarding and replenishing a hand, a player may issue a forced discard by passing the flag card back to the opponent. This forces the player to replenish and discard at least one bar. The player may then proceed to take a turn.

**CAPTURE:** At the beginning of a turn and before touching a strip a player has 10 seconds to announce CAPTURE and capture a trick that was not detected by the opposing player. After using the Touch & Announce rule and capturing the trick, the player draws 3 bars (2 to replenish the opponent's hand and one for the center of the board). The player then begins a regular turn.

**BEGINNING A TURN:** A player's turn begins upon receiving the flag card.

**END OF TURN:** A player's turn ends when the player passes the flag card to the opponent and releases hold of it.

**END OF GAME:** If after making a trick, there is less than 3 bars in draw pile to replenish hand and bar in center of board, the official ends the game.

**WIN/TIE:** At end of each game, the official subtracts the number of bars in the discard pile from the bars acquired in the scoring pile. The official declares a win to the player with the greatest difference. A tie is declared if both players have the same difference. A player who wins 2 out of 3 games or wins one game and ties 2 wins the Frac Fact event. (A tie in the Frac Fact event is declared if neither player achieves this.)

**CHALLENGES:** A player may issue a challenge upon receiving the flag card and **BEFORE** touching a fraction strip (see Capture exception - Rule 16). If challenge is **CORRECT**, the 3 strips forming the trick are awarded to challenger and the challenger begins a regular turn. If **INCORRECT**, the challenger forfeits a turn. **NOTE:** When challenging an arithmetic sentence, the challenger does not have to state the correct sentence.

**CHALLENGING A CAPTURE:** A challenge to a capture must be stated **BEFORE** the challenged player replenishes the 3 strips to begin the regular part of the turn. If challenge is **CORRECT**, the challenger gets 3 strip trick and the challenged player completes the turn. If **INCORRECT**, the challenged player gets an additional turn after completing a regular turn.

**GAME TIME LIMIT:** If time is called and there are sufficient bars in the draw pile, a round is allowed to be completed.

**NOTE:** If a player forgets to pass the flag card, the supervisor reminds the player to do so. This is not treated as a challenge situation, but rather a time issue. In a similar manner, if a player starts a turn before the opposing player has passed the flag card, then the supervisor reminds the player that the opposing player is still taking a turn and does not deal with this as a challenge situation.

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