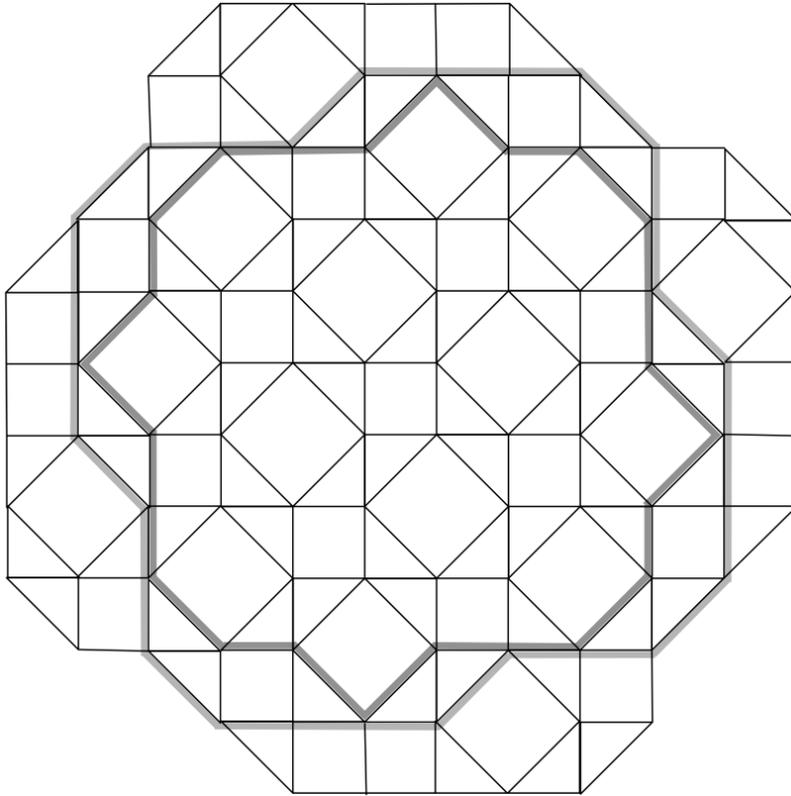


For 1 to 4 players
Ages 12 to adult

Ternion Factor™



Three games of strategy
Solitaire puzzles



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*The beautiful geometric Ternion Factor gameboard
was hand-crafted and laser-engraved by
Kadon Enterprises, Inc.
Pasadena, Md. 21122
See our Website, www.gamepuzzles.com*

INTRODUCTION

The *Ternion Factor* (pronounced tur-nee-uh-n—definition: a set or group of three; a triad) is a strategy game for two to four players based on the concept of three. The goal is to have all eighteen— $(3+3) \times 3$ —of your pawns on the board at the end of your turn. You achieve this goal by moving three pawns every turn, trying to form a ternion—three pawns on adjacent, connected intersections. While you may move any pawn on the board, only your pawns can trigger the creation of a ternion. The number of pawns added (or possibly removed) depends on how many of the current player's pawns are participating in the ternion.

For the game *Ternion Spaces*, the triangles and small square spaces are used instead of the lines and intersections. With a goal similar to *Ternion Factor*, pawns may move into spaces by crossing the lines between the spaces (horizontal or vertical move) or through a common intersection between two spaces (diagonal move). The large diamond spaces may be passed through (and counted as one movement space), but cannot be occupied. A ternion is formed when you move one of your pawns to a space adjacent to two other pawns. Pawns are considered adjacent when the spaces they occupy share any combination of common horizontal or vertical faces or common intersections. The number of pawns added (or removed) depends on how many of the current player's pawns are participating in the ternion.

The game *Escape!* is a two-player game involving jumping. The goal is to jump your pawns across the board so they can escape when they reach the other player's back line. The first player to exit all of their pawns from the board is the winner. Players may jump as far as they wish, as long as they have a path to follow. The jumps do not need to be straight line (as you would find in checkers). Twisty, convoluted jumps are highly encouraged.

Rules for the game of *Ternion Factor*

2 to 4 players—20 to 40 minutes depending on the number of players

Game Equipment

- ◆ Gameboard.
- ◆ Four sets of eighteen pawns, each player using a different color.
- ◆ Three *move markers* numbered 1, 2, and 3.
- ◆ Nine *ternion markers* engraved with the letter T.
- ◆ Six *add-pawn markers* engraved with the letter A.

Important Terms

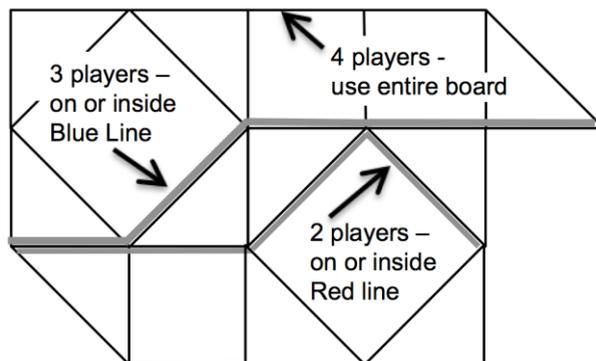
- ◆ **Play area**—depending on the number of players, the board area used will change. See *Preparing to Play* for additional information.
- ◆ **Turn action**—a sequence of three actions, repeated three times per turn.
- ◆ **Move markers**—When a pawn is moved along a line from one intersection to an adjacent intersection, a move marker is placed on that line to help trace the movement of the pawn and its intersection of origin.
- ◆ **Ternion markers**—are placed on top of the three pawns forming the ternion that was created as a result of a player's turn action.
- ◆ **Add-pawn markers**—are placed on top of pawns added to the board during a player's turn action.

NOTE: Pawns with a ternion marker or an add-pawn marker on them are considered "out of play" until the end of the current player's turn. Out-of-play pawns may not be moved and are ignored during the *ternion identification* phase of a turn action. Should a pawn need to be removed as part of the *ternion resolution* phase, the removed pawn's ternion marker remains on the board to identify the removed pawn's last location. This marker is treated the same as a ternion marker sitting on top of a pawn.

Preparing to Play — The Play Area

Players choose their pawn color and collect their eighteen pawns. Based on the number of players, identify which intersections can be used during game play (the *play area*):

- ◆ **4 players**—all intersections are used.
- ◆ **3 players**—intersections on and inside the blue boundary line are used.
- ◆ **2 players**—intersections on and inside the red boundary line are used.



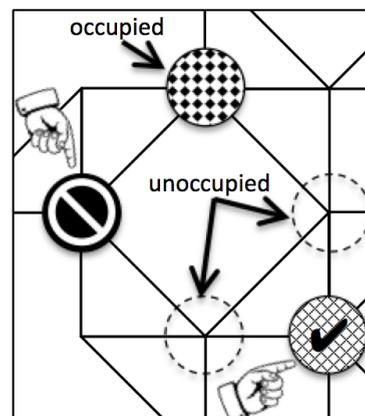
Determining the Winner

The first person with all eighteen pawns in the play area at the end of their turn is the winner.

Placement Phase

The player chosen to play first places one of their pawns on *any* intersection within the defined play area. Proceeding clockwise, each player adds a pawn to the play area on an unoccupied intersection where all adjacent intersections are also unoccupied. This continues until each player has placed:

- ◆ Six pawns (for the standard game).
- ◆ Four pawns (for the extended duration game).



Turn Phase

Once the *placement phase* is complete, players take turns in clockwise order, starting with the player chosen to go first.

During their turn, players complete *exactly* three turn actions, even if one or more of those actions is detrimental to their success. A turn consists of the following three steps:

1. The three required turn actions (see *The Turn Actions* below).

2. A review of the actions to ensure that the player is satisfied with the results. If the player is not satisfied, now is the time to:
 - a. Alter the location of added pawns.
 - b. Change which pawn in that ternion is affected if a pawn was removed from a ternion.
 - c. Reverse all actions taken this turn and try again.

NOTE: If a player wants to change the location of *any* pawn moved this turn or alter which pawns participated in a ternion, the player's only recourse is to reverse the *entire* turn and start over.
3. Removal of all markers (the ternion and add-pawn markers and the three move markers) from the board and passing the move markers to the next player.

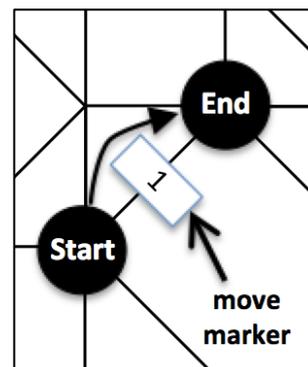
Players unable to complete three turn actions

Should a player be unable to complete all three turn actions, that player drops out of the game. The play area is reset to the beginning of the exiting player's turn—pawns moved are returned to their starting position, pawns added are removed, pawns removed are placed back on the board, and all ternion and add-pawn markers are removed. Any other pawns belonging to the exiting player stay on the board; the remaining players may move these pawns and use them to create their own ternions. Game play continues with the next player.

The Turn Actions

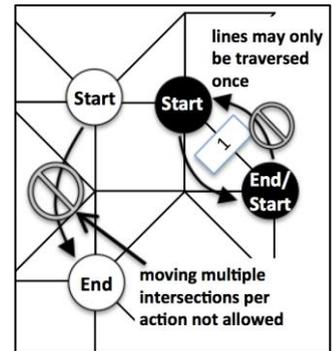
Step 1: Moving the pawns

- ◆ During a player's turn action, a player may move *any* pawn currently in the play area—even a pawn belonging to another player.
- ◆ The chosen pawn moves from its starting location to the next adjacent, connected intersection.
- ◆ Place the next sequential move marker on the line connecting the starting and ending intersections.



Important notes on pawn movement

- ◆ During a turn action, a pawn's movement ends at the first intersection the pawn encounters. Moving through multiple intersections requires multiple turn actions.
- ◆ Any pawn topped by an add-pawn (A) marker or any pawn or intersection with a ternion (T) marker is considered out of play and may not be moved (an empty intersection with a ternion marker (T) on it occurs where a pawn was removed as a result of a prior turn action).
- ◆ A pawn may not travel across a line that contains a move marker. Reversing direction to use up turn actions is not allowed.



Making a Jump move

Players with sufficient move markers may use their turn actions to jump a pawn over another pawn (or even two pawns). Jumps are limited by the following rules:

- ◆ Jumping over one pawn requires two move markers (Figure 1).
- ◆ A pawn may not jump over another pawn of the same color (Figure 2).
- ◆ Jumping over two pawns requires three move markers (Figure 3).
- ◆ Jumping over an empty intersection is not allowed.

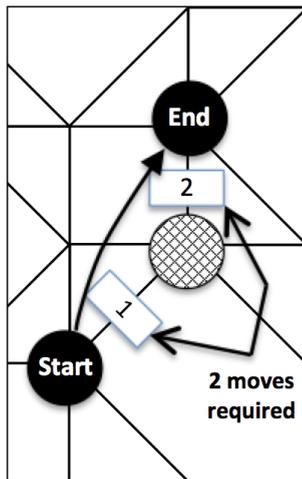


Figure 1

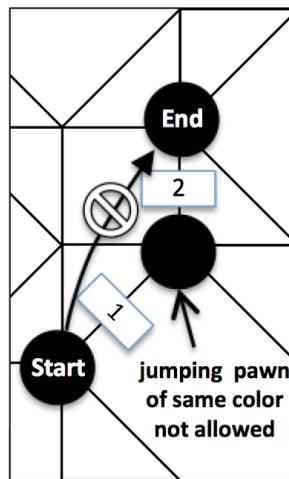


Figure 2

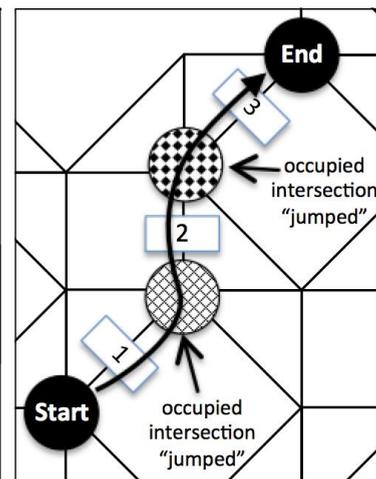


Figure 3

Step 2: Identifying a Ternion

A ternion is created when *all* the following conditions are met:

- ◆ The pawn has come to rest on an empty intersection.
- ◆ The pawn moved in this turn action belongs to the current player (Figures 4 and 5).
- ◆ All three pawns are on adjacent intersections (dashed lines in Figures 4, 6, and 7).
- ◆ No pawn in the potential ternion is capped by a ternion marker (T) or an add-pawn marker (A) (Figure 7).

(The figures referenced above are on the following page)

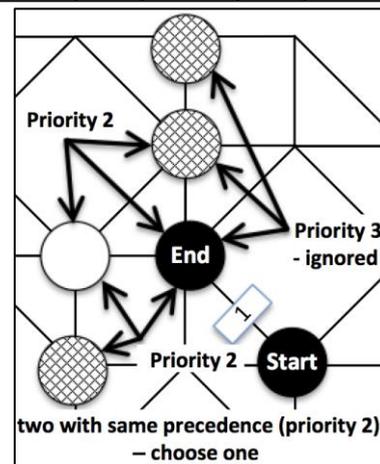
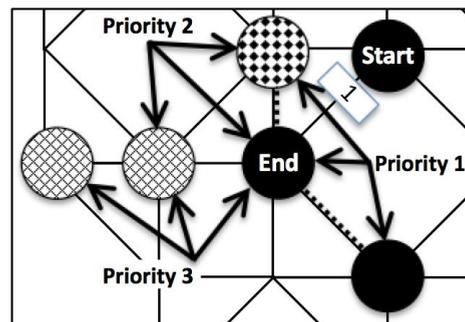
Precedence order when multiple ternions are created

If a turn action results in the creation of multiple potential ternions, the following rules determine which set of three pawns takes precedence:

1. The set of three pawns with the greatest number of pawns belonging to the current player is chosen ahead of all others (priority 1).
2. For a game played by 3 or 4 players, the set of three pawns representing three players is chosen ahead of sets of three pawns representing two players (priority 2).
3. The lowest precedence is given to a set of three pawns where one pawn belongs to the current player and only two players are represented (priority 3).

If it is determined that multiple sets of three pawns match the same highest applicable precedence rule (in the example to the right, priority 2), the current player may choose which set of three pawns will become the ternion.

Place a ternion marker (T) on top of each of the three pawns making up the newly identified ternion.



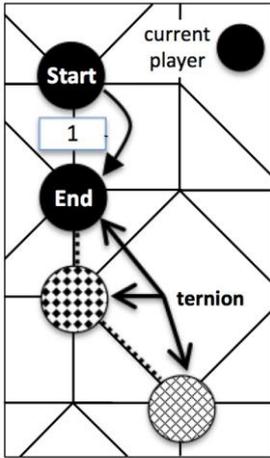


Figure 4

Figure 4: A black pawn is moved and a ternion is created.

Figure 5: A checkered pawn is moved. No ternion is created (current player is using black pawns).

Figure 6: A white pawn is moved twice, and then a black pawn is moved once, creating a ternion. Moving the black pawn first would not have created a ternion.

Figure 7: A black pawn is moved and a ternion is created using pawns devoid of markers. The pawns with the ternion (T) markers, the ternion (T) marker on the intersection representing a removed pawn, and the add-pawn (A) markers are ignored, as they were part of a prior turn action.

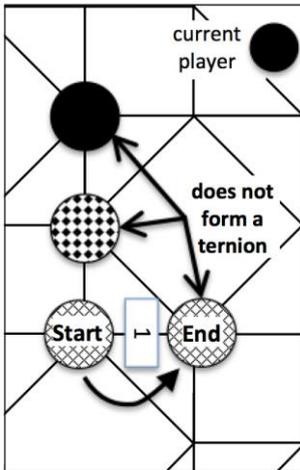


Figure 5

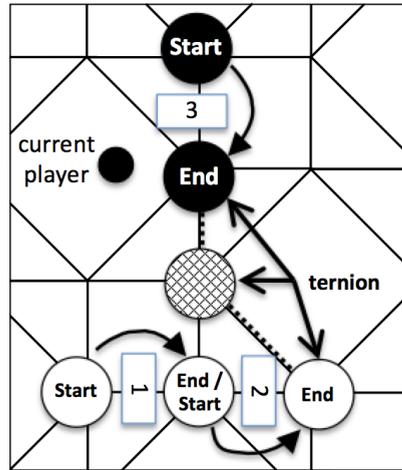


Figure 6

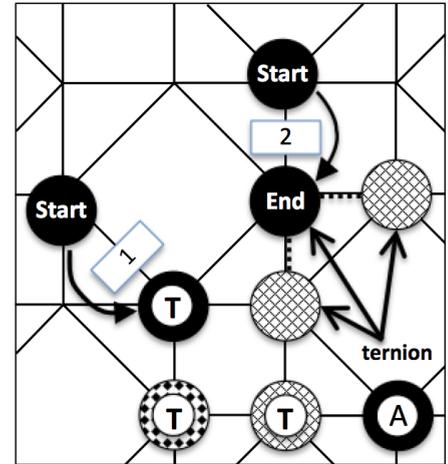


Figure 7

Step 3: Ternion Resolution

In *ternion resolution*, you determine how many pawns the current player will be adding or removing from the play area.

1. Count the number of pawns in the ternion belonging to the current player.
2. Count the number of players represented in the ternion. *For two-player games, this step is not necessary; the gray row in the following chart can be ignored.*
3. Use the following chart to determine the number of pawns to add or remove.

Number of players	Number of pawns in ternion belonging to current player	Number of players represented	Pawns to add	Pawns to remove	Refer to Figure
2,3,4	1	2	2	0	8
3,4	1	3	1	0	9
2,3,4	2	2	2	1	10
2,3,4	3	1	1	2	11

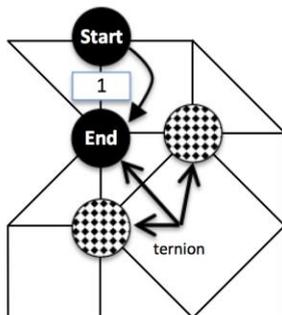


Figure 8

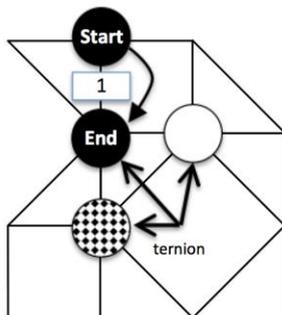


Figure 9

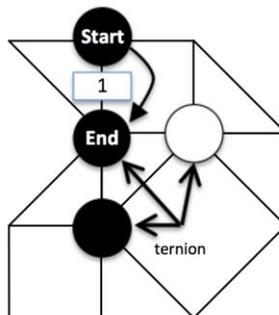


Figure 10

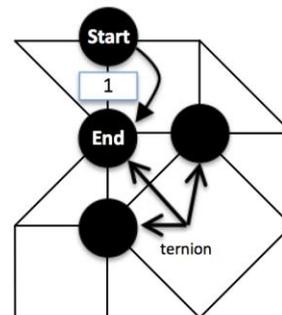


Figure 11

Updating the play area based on the chart

Pawns to be removed are resolved first; pawns to be added are resolved second.

NOTE: A pawn that is removed during a turn action *may* be added back to the board immediately (this includes the same turn action in which it was removed).

Pawns to be *removed* from the board:

- ◆ Are part of the ternion created during this turn action.
- ◆ Belong to the current player—players may only remove their own pawns from the play area.
- ◆ Are removed from the play area, but the ternion markers placed on these pawns during the *ternion identification* step remain on the vacated intersections. The intersections are still considered “occupied” for purposes of pawn movement, jumping or adding new pawns to the play area until the end of the player's turn.

A pawn *added* to the board:

- ◆ Has the add-pawn marker placed on top of the pawn *before* it is placed in the play area. This helps prevent confusion over which pawn was just added.
- ◆ May be placed on any intersection within the play area, even on an intersection that is adjacent to an occupied intersection.
- ◆ May be placed only on an unoccupied intersection.

If the player does not have sufficient pawns to complete the *add* step (i.e., the player has one pawn remaining, but creates a ternion that would add two pawns to the board), the player adds as many pawns as they have remaining.

Strategy Hints

- ◆ The *Placement Phase* is just as important as the *Turn Phase*. Poorly placed pawns will make it difficult to succeed later in the game.
- ◆ When adding a new pawn to the board (during *Placement* or *Turn Phases*), remember that another player may benefit from using your pawns to create a ternion. To help mitigate this benefit, try to position your pawn adjacent to one of the other player's pawns. That player will need to move their pawn to another intersection (wasting one of their three moves) or risk having to remove a pawn during *ternion resolution*.
- ◆ Plan your turn actions carefully. A ternion can be created only when you move one of your own pawns.
- ◆ You can prevent the premature creation of a ternion by moving another player's pawn first. This is useful when another player's pawn is adjacent to one of your pawns. Moving that player's pawn to another intersection could save you from having to remove a pawn during *ternion resolution*.
- ◆ During the latter part of a game, you may find it advantageous to create a ternion using two of your pawns on your first turn action. By taking two of your own pieces out of play (even though one will need to be removed from the play area), you may find it easier to create a ternion using only one of your pawns for your second and/or third turn action.

Rules for the game of *Ternion Spaces*

2 to 4 players—20 to 30 minutes

Ternion Spaces is a strategy game where the object is to have all eighteen of your pawns on the board at the end of your turn. This game is played in the polygon-shaped spaces instead of on the lines and intersections. Pawns can move from one polygon to another by crossing over the common line that joins them or by traversing a common intersection. While many of the rules are similar to *Ternion Factor*, differences have been highlighted by a change to this font.

Important terms

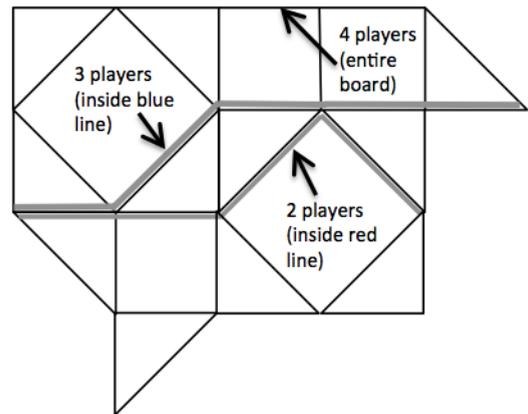
- ◆ **Play area**—depending on the number of players, the board area used will change. See *Preparing to Play* for additional information.
- ◆ **Turn action**—a sequence of three actions, repeated three times per turn.
- ◆ **Adjacent space**—a space that shares a common borderline with another space or that shares an intersection with another space (see *Placement Phase* for more information).
- ◆ **Move markers**—When a pawn is moved to another space, across a line or intersection, a move marker is placed on that line or intersection to help trace the movement of the pawn and its originating space.
- ◆ **Ternion markers**—are placed on top of the three pawns forming the ternion that was created as a result of a player's turn action.
- ◆ **Add-pawn markers**—are placed on top of pawns added to the board during a player's turn action.

NOTE: Pawns with a ternion marker or an add-pawn marker on them are considered "out of play" until the end of the current player's turn. Out-of-play pawns may not be moved and are ignored during the *ternion identification* phase of a turn action. Should a pawn need to be removed as part of the *ternion resolution* step, the removed pawn's ternion marker remains on the board to identify the removed pawn's last location. This marker is treated the same as a ternion marker sitting on top of a pawn.

Preparing to Play

Players choose their pawn color and collect their eighteen pawns. Based on the number of persons playing, identify which spaces can be used during game play (the *play area*):

- ◆ **4 players**—all spaces on the board are used.
- ◆ **3 players**—spaces inside the blue boundary line are used.
- ◆ **2 players**—spaces inside the red boundary line are used.



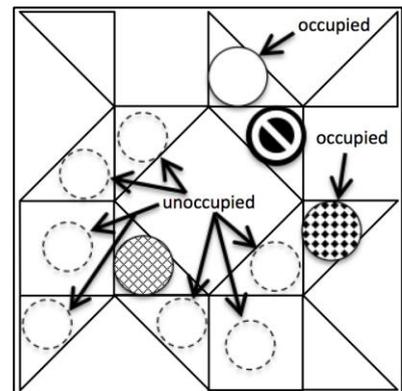
Determining the Winner

The first person with all eighteen pawns in the play area at the end of their turn is the winner.

Placement Phase

The player chosen to play first places one of their pawns in *any* space, excluding the large diamond spaces, within the defined *play area*.

Proceeding clockwise, each player adds a pawn to the **play area** in an unoccupied space where all adjacent spaces are also unoccupied. Adjacent spaces include spaces that share a common borderline or share an intersection with another space. **Placement continues until each player has placed four pawns in the play area.**



Turn Phase

Once the *placement phase* is complete, players take turns in clockwise order, starting with the player chosen to go first.

During a player's turn, the player completes *exactly* three moves, even if a move is detrimental to their success.

A turn consists of the following three steps:

1. The three required turn actions (see *The Turn Actions* below).
2. A review of the actions to ensure that the player is satisfied with the results. If the player is not satisfied, now is the time when they may:
 - a. Alter the location of added pawns.
 - b. Change which pawn in that ternion is affected, if a pawn was removed from a ternion.
 - c. Reverse all actions taken this turn and try again.

NOTE: If a player wants to change the location of *any* pawn they moved this turn or alter which pawns participated in a ternion, the player's only recourse is to reverse their *entire* turn and start over.
3. Removal of all markers (the ternion and add-pawn markers and the three move markers) from the board and passing the move markers to the next player.

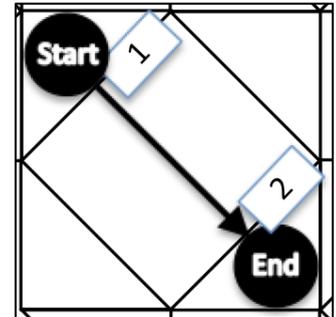
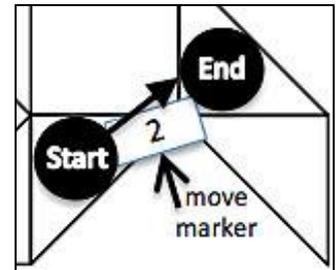
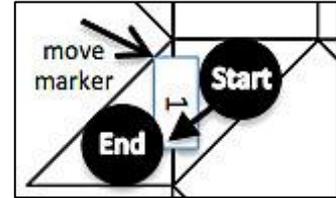
Players unable to complete three turn actions

Should a player be unable to complete all three turn actions, that player drops out of the game. The play area is reset to the beginning of the exiting player's turn—pawns moved are returned to their starting position, pawns added are removed, pawns removed are placed back on the board, and all markers are removed. Any other pawns belonging to the exiting player stay on the board; the remaining players may move these pawns and use them to create their own ternions. Game play continues with the next player.

The Turn Actions

Step 1—Moving the pawns

- ◆ During a player's turn action, a player may move *any* pawn currently in the play area—even a pawn belonging to another player.
- ◆ The chosen pawn moves from its starting location to the **next** adjoining space by moving across a line or common intersection that separates the two spaces.
- ◆ Place the next sequential move marker on the line or intersection crossed (top example). For intersections, place the marker so it rests primarily in the space the pawn moved from (middle example) so that the starting location can also be determined.
- ◆ Moving a pawn across the large diamonds requires two move markers (bottom example). Pawns may not stop on the large diamond spaces.



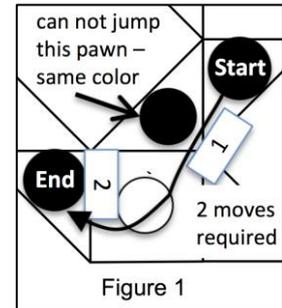
Important notes on pawn movement

- ◆ During a turn action, a pawn's movement ends at the first space the pawn encounters. Moving multiple spaces requires multiple turn actions.
- ◆ Any pawn topped by an add-pawn marker (A) or any pawn or empty space with a ternion marker (T) is considered out of play and may not be moved (an empty space with a ternion marker (T) in it occurs where a pawn was removed as a result of a prior turn action).
- ◆ A pawn may not cross a line or intersection that contains a move marker. Reversing direction to use up turn actions is not allowed.

Making a Jump move

If a player has sufficient move markers, that player may opt to jump a pawn over another pawn (or even two other pawns). Jumps are limited by the following rules:

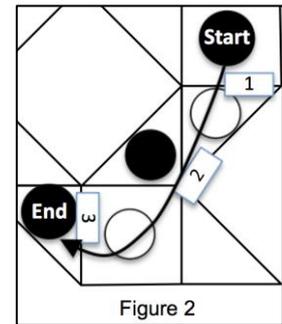
- ◆ Jumping over another pawn requires two moves (Figure 1).
- ◆ A pawn may not jump over another pawn of the same color (Figure 1).
- ◆ Jumping over two pawns requires three move markers (Figure 2).



Identifying a Ternion

A ternion is created when all the following conditions are met:

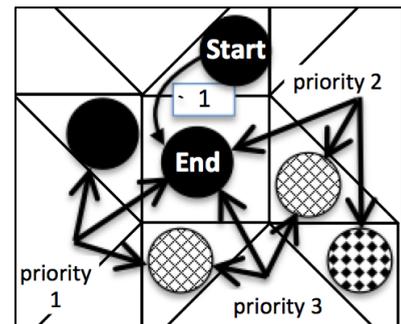
- ◆ The pawn has come to rest on an empty space. Reminder: a pawn may cross a large diamond space but it may not stop there.
- ◆ The pawn moved this turn action belonged to the current player (Figure 3 and 4 on next page).
- ◆ The three pawns are located on adjacent spaces (Figures 3, 5, 6 on next page).
- ◆ No pawn in the potential ternion is capped by a ternion marker (T) or an add-pawn marker (A) (Figure 6 on next page).



Precedence order when multiple ternions are created

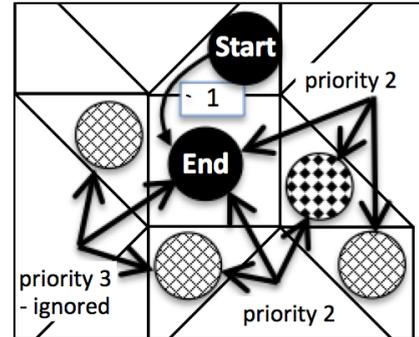
If a turn action results in the creation of multiple potential ternions, the following rules determine which set of three pawns takes precedence:

1. The set of three pawns with the greatest number of pawns belonging to the current player is chosen ahead of all others (priority 1).
2. For a game played by 3 or 4 players, the set of three pawns representing three players is chosen ahead of sets of three pawns representing two players (priority 2).



3. The lowest precedence is given to a set of three pawns where one pawn belongs to the current player and only two players are represented. (priority 3).

If it is determined that multiple sets of three pawns match the same highest applicable precedence rule (in the example, to the right, rule 2), the current player may choose which set of three pawns will become the ternion.



Place a ternion marker (T) on top of each of the three pawns making up the newly identified ternion.

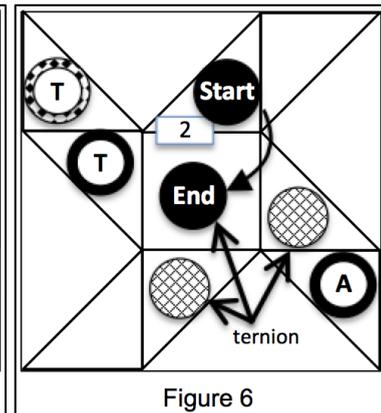
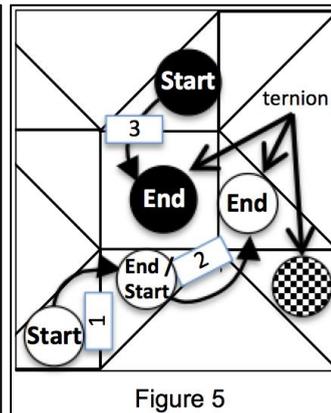
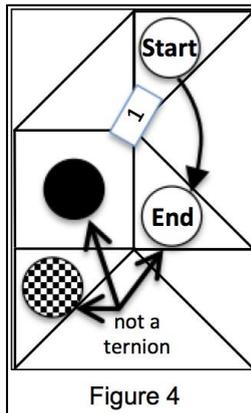
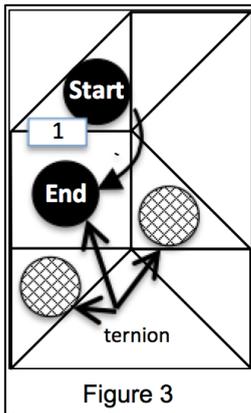
In the following examples, the current player is using black pawns.

Figure 3: The black pawn is moved and a ternion is created.

Figure 4: The white pawn moved, but no ternion is created—player is using black pawns.

Figure 5: The white pawn is moved twice and a black pawn is moved once to create a ternion. Moving the black pawn first would not create the ternion.

Figure 6: The pawns with the (T) markers are ignored, as they are part of a ternion created in a prior move this turn. The pawn with the (A) markers is ignored, as it was added in a prior move this turn.



Resolving a Ternion

In *ternion resolution*, you determine how many pawns a player will add to or remove from the play area.

1. Count the number of pawns belonging to the current player.
2. Count the number of players represented in the ternion. *For two-player games, this step is not necessary; the gray row in the following chart can be ignored.*
3. Use the following chart to determine the number of pawns to add or remove.

Number of players	Number of pawns in ternion belonging to current player	Number of players represented	Pawns to add	Pawns to remove	Refer to Figure
2,3,4	1	2	2	0	7
3,4	1	3	1	0	8
2,3,4	2	2	2	1	9
2,3,4	3	1	1	2	10

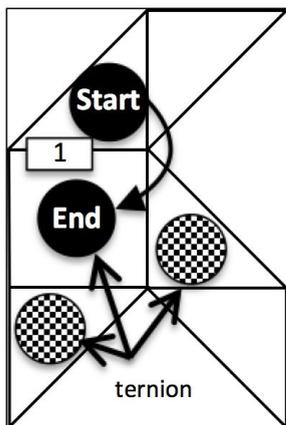


Figure 7

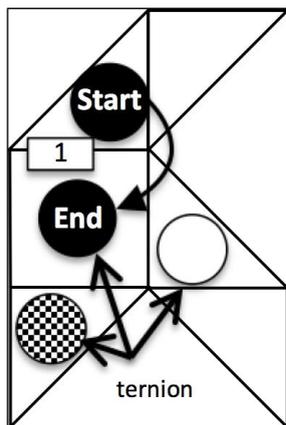


Figure 8

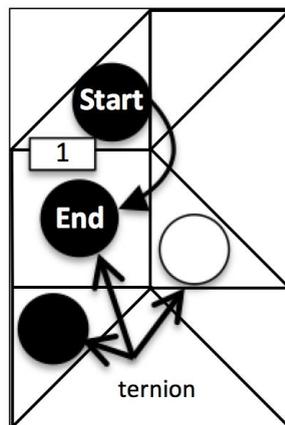


Figure 9

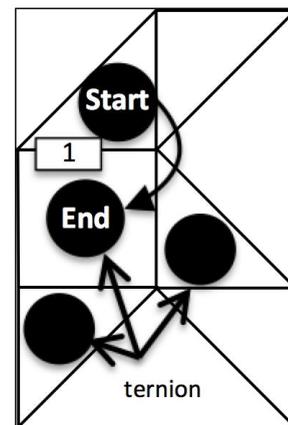


Figure 10

Updating the play area based on the chart

Pawns to be removed are resolved first; pawns to be added are resolved second.

NOTE: A pawn that is removed during a turn action *may* be added back to the board immediately (this includes the same turn action in which it was removed).

Pawns *removed* from the board:

- ◆ Are part of the ternion created during this turn action.
- ◆ Belong to the current player—players may only remove their own pawns from the play area.
- ◆ Are removed from the play area, but the ternion markers placed on these pawns during the *ternion identification* step remain in the vacated spaces. The spaces are still considered “occupied” for purposes of pawn movement, jumping or adding new pawns to the play area until the end of the player's turn.

Pawns *added* to the board:

- ◆ Have the add-pawn marker placed on top of the pawn before it is placed in the play area. This eliminates confusion over which pawn was just added.
- ◆ May be placed on any space (except the large diamond spaces) within the play area, even in a space that is adjacent to an occupied space.
- ◆ May be placed only in an unoccupied space.

If the player does not have sufficient pawns to complete the *add* step (i.e., the player has one pawn remaining, but creates a ternion that would add two pawns to the board), the player adds as many pawns as they have remaining.

Strategy Hints

- ◆ The *placement phase* is just as important as the *turn phase*. Poorly placed pawns will make it difficult to succeed later in the game.
- ◆ Plan your moves carefully. A ternion can be created only when you move one of your own pawns. You can prevent the premature creation of a ternion by moving another player's pawn first.
- ◆ During the latter part of a game, you may find it advantageous to create a ternion using two of your pawns on your first turn action. In Figure 11, a ternion is created with two black pawns (two pawns added, one removed). Figure 12 shows how the out-of-play pawns (from Figure 11's action) no longer interfere with the creation of a single black pawn ternion (two pawns added).
- ◆ When adding a new pawn to the board, remember that another player will benefit from using your pawns to create a ternion. To reduce that benefit to another player, try to position your pawn adjacent to another player's pawn. The other player will then need to move that own pawn to another space (wasting one of their three moves) or remove a pawn during *ternion resolution*.
- ◆ If you have previously played ***Ternion Factor***, be aware that the game play is very different in ***Ternion Spaces*** due to the difference in the number of adjacent intersections vs. adjacent spaces.
 - In ***Ternion Factor*** each intersection will join to at most five other intersections.
 - In ***Ternion Spaces***, the triangular spaces will join to seven other spaces (except on the edge of the board), while the square spaces join to eight other spaces.

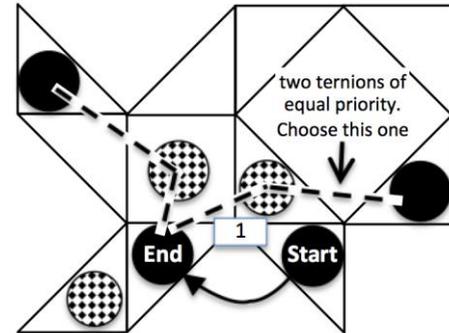


Figure 11

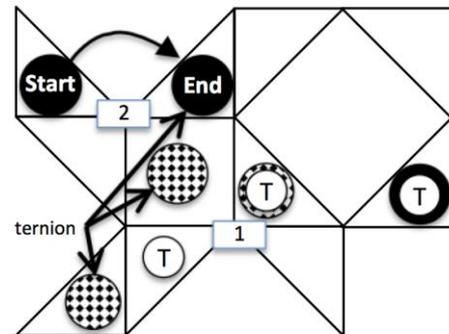


Figure 12

Rules for the game of *Escape!*

2 players—15 to 20 minutes

Escape! is a strategy game where pawns are jumped across the board to reach one of the intersections beyond the blue line on the other player's side of the board.

Game Equipment

- ◆ Gameboard.
- ◆ Two sets of eighteen pawns, one color per player.

Preparing to play

Players place their pawns as shown in Figure 1.

Note that each back row contains one empty intersection.

Determining the Winner

The first player whose pawns all *Escape!* is the winner.

Rules

- ◆ Players take turns jumping one pawn over other pawns to progress across the board.
- ◆ Multiple jumps and convoluted jumps are allowed (see Figure 2).
- ◆ A pawn has *Escaped!* and is immediately removed from the board when it reaches any intersection beyond the other player's blue line.
- ◆ At least one intersection beyond the blue line for each player must be kept empty at all times.
- ◆ When jumping, the pawn may land on any intersection adjacent to the pawn being jumped (see Figure 2). Pawns that are jumped over are not removed.
- ◆ The intersections beyond the blue line to the **left and right** of the players' starting locations are out of bounds. Landing a pawn on one of these intersections returns that pawn to the farthest back empty intersection on the owner's side.
- ◆ A pawn may "sneak" (slide) along any horizontal or vertical line, stopping only when the line is no longer horizontal or vertical. If another pawn is on that line, the sneaking pawn stops at the intersection prior to the blocking pawn. Executing a sneak bars the player from making any jumps on that turn.

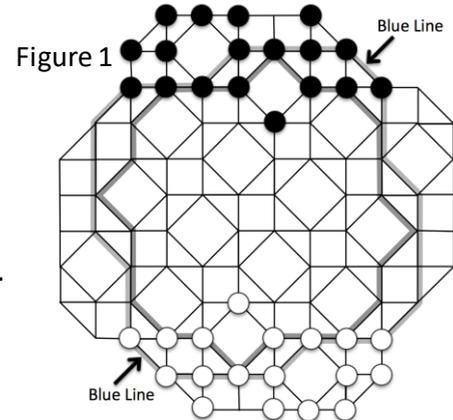
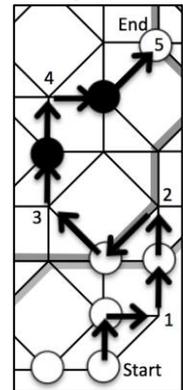
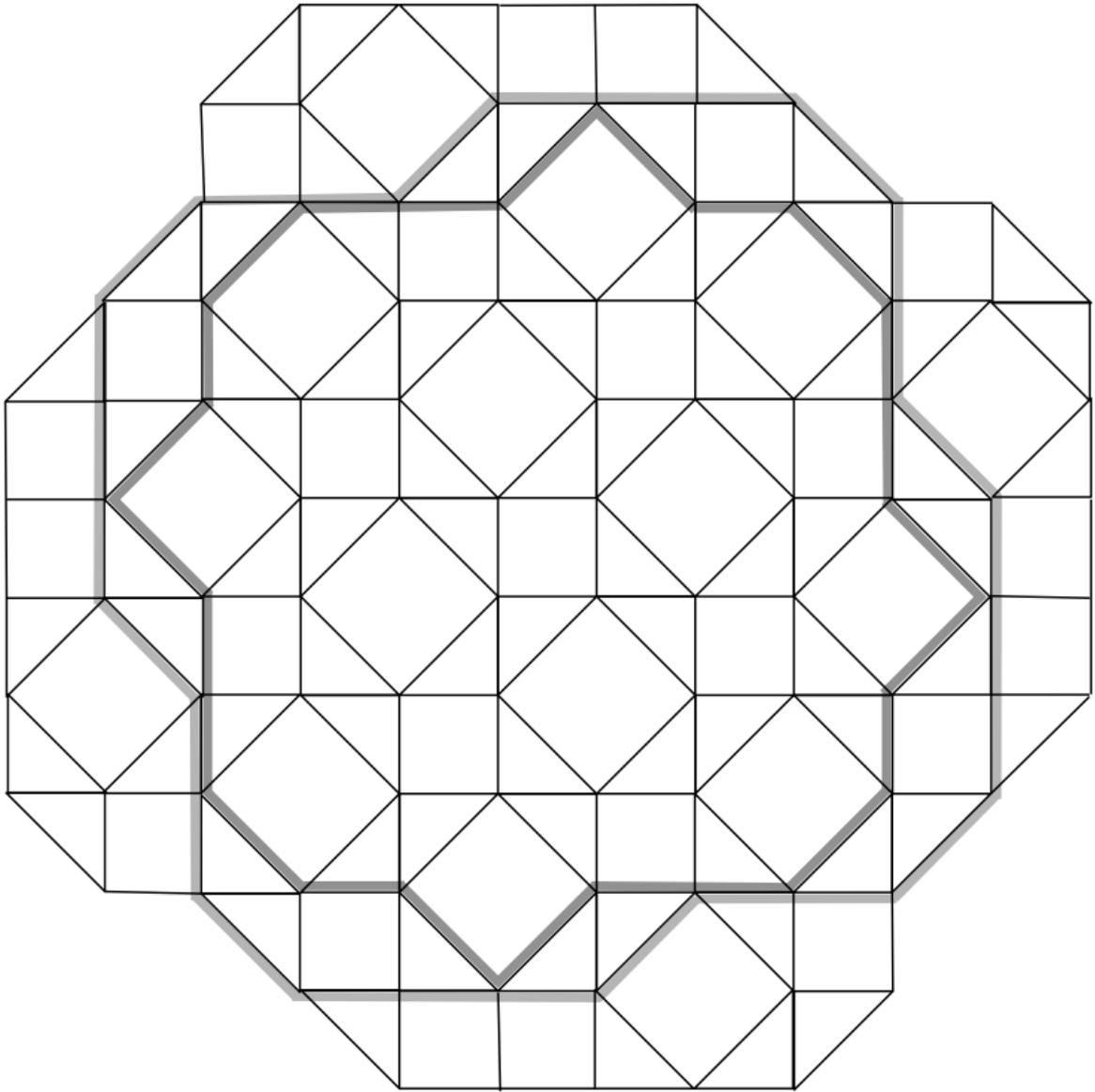


Figure 2





Ternion Factor™ *from Kadon*