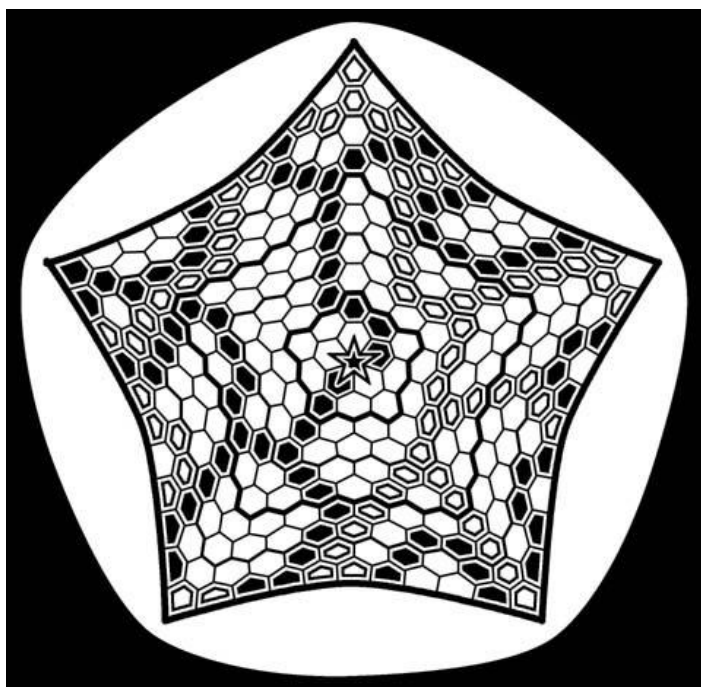


For 2 players  
Ages 10 to adult

# \*STAR

*Connection game par excellence*



**Game Rules**  
**Strategy Hints**  
**Variations**  
**References**  
**Solitaires**



*A product of  
Kadon Enterprises, Inc.*

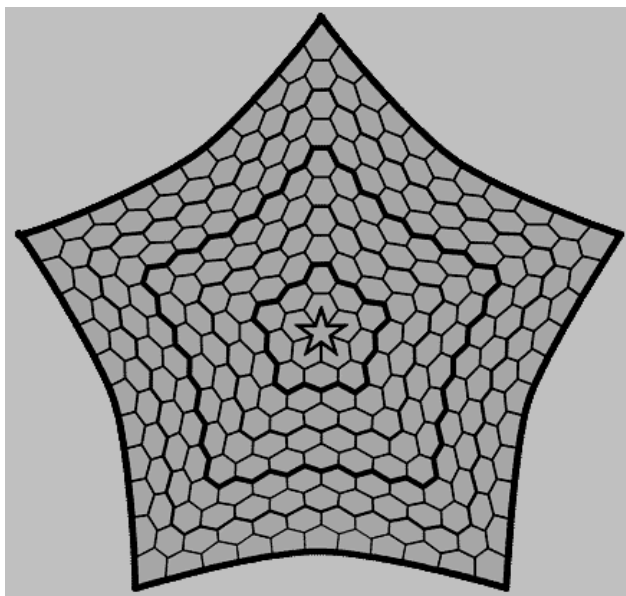
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## INTRODUCTION

\*STAR is a game of skill, strategy and tactics for two players. It is the latest of a widely acclaimed series of connection games, including Y, Poly-Y, and STAR, invented by Ea Ea (formerly Craige Schensted) and Charles Titus. Although each of these games has its ardent devotees, \*STAR may be the deepest and best. Only time and the experience of many players will tell. We invite you to learn how to play \*STAR and to join us in creating its literature and history.

The official \*STAR set consists of glass “stones” of two different colors and the five-sided \*STAR tournament board shown below. The heavy lines delineate smaller, five-sided boards on which the game can be played with exactly the same rules as on the full board. These smaller areas are for the convenience of beginners or for players who want to play a swift game. In our illustrations, we shall sometimes use one of the many smaller boards formed by removing some of the outer “rings” of cells.



*The \*STAR gameboard*

## RULES FOR \*STAR

### *Procedure*

The two players take turns. On their turn, players place a stone of their color on any empty cell of the board, except that neither player may play in the special star-shaped “bridge” at the center of the board (but both players may use it to make a connection). Once placed, a stone remains in place for the rest of the game.

### *Goal of the Game*

The object of the game is to score points by acquiring edge cells with the fewest possible separate “stars” (to be explained). The game ends when the board is filled or when the players agree that neither side can gain any more points.

### *Definitions*

A *star* is a region of connected cells in one color containing two or more edge cells. A star is said to own all the edge cells it contains plus all the edge cells it surrounds that are not owned by another star. A player is said to own all the edge cells owned by his or her stars. See (A).

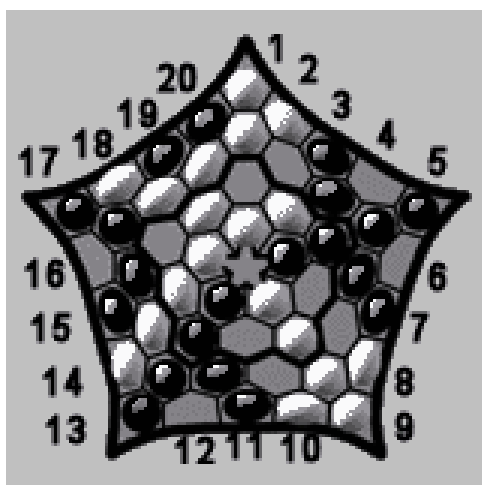


Diagram (A)

In Diagram (A), we illustrate the meaning of these definitions. For the sake of easy reference, we have numbered the edge cells on the board from 1 to 20. White has one large star connected through the star bridge at the center. It contains, and thus owns, edge cells 1, 2, 18, 14, 8, 9, and 10—seven edge cells in all. Black has three stars, one of which is connected through the star bridge. This large Black star contains, and thus owns, the edge cells 3, 5, 7, 13, and 11. In addition, it surrounds, and thus owns, the edge cells 4, 6, and 12. Hence the large Black star owns eight edge cells. Black also has two smaller stars, one of which owns the edge cells 19 and 20, while the other owns 15, 16, and 17. Altogether, Black's three stars own 13 edge cells.

### *Scoring*

- Players get one point for each edge cell they own.
- In addition, the player who owns three or more of the corner edge cells gets one extra point.
- Finally, the players count the separate stars in each of the two colors and determine the difference. The score of the player with the smaller number of separate stars is increased by twice the difference, while the score of the player with the larger number of stars is decreased by twice the difference.

We shall refer to these final adjustments in score as the players' "awards". The player with the fewer stars gets a positive award, and the other player gets a negative award. The awards strongly favor connecting stars and profoundly influence the nature of the game.

With this system of scoring, the total combined score of the two players is always equal to the total number of edge cells plus one. This means that when the players play on the large tournament board (which has 50 edge cells), their combined score at the end of the game will always be 51. When they play on the board of Diagram (A) above (which has 20 edge cells), their combined score at the end of the game will be 21. These boards and the scoring are designed so that the total combined score of the two players is always odd; there is never a tie.

### *Illustrations of Scoring*

Let's start by scoring the game of Diagram (A) above. As described, Black has three stars; they own 13 edge cells, of which three are corner edge cells. Therefore, without reckoning in the final award, Black would have 14 points.

As also noted, White has one star, which owns 7 edge cells. So, without the final award, White would have only 7 points. However, the final award changes the picture.

Since White has two fewer stars than Black, we add  $2 \times 2 = 4$  points to White's score to get  $7 + 4 = 11$  points, while we must subtract the same number from Black's score to get  $14 - 4 = 10$  points. So the final scores are: White 11, Black 10. White wins.

Note that the total combined score is 21, just as it should be. Note also that on the board of Diagram (A), there are several empty cells. The game ends, nevertheless, because the players recognize that no matter with which color one fills these cells, the outcome will be the same. In general, experienced players will recognize that a

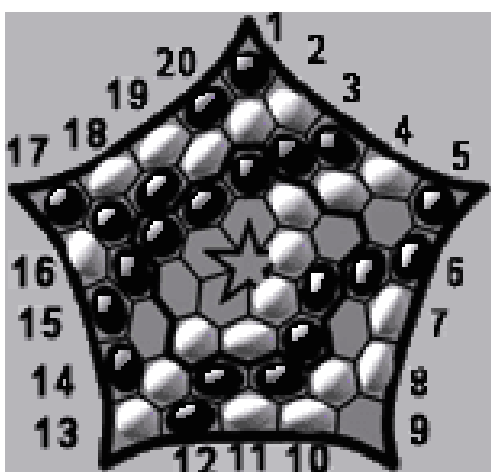
game has ended long before the board is filled.

For more practice in scoring, let's consider the game depicted in Diagram (B) below.

Here both White and Black have the same number of stars, namely three. Therefore, in this game, there will be no final award for the players.

The three Black stars own, respectively: edge cells 1 and 20; edge cells 3, 14, 15, 16, and 17; and edge cells 5, 6, and 12, for a total of 10 points. But Black gets an extra point because three of the edge cells owned by Black are corner edge cells. Therefore, Black's final score is 11.

White's three stars own: edge cells 2, 18, and 19; edge cells 4 and 13; and edge cells 7, 8, 9, 10, and 11, for a total of 10 points. White's final score is 10. Black wins. Note that again the total combined score is 21, as it should be.



*Diagram (B)*

## Hints for Strategy and Tactics

### *General Remarks*

Once you understand the scoring, you are ready to begin to play. We suggest playing on one of the smaller boards at first until you get the feel of the game. Below are some hints to lead you toward good play and great enjoyment.

### *Evaluating Positions*

The scoring of \*STAR emphasizes both central play (to make as few stars as possible) and edge play (where you score points). Your moves will have the right balance only if you are always mindful of both scoring requirements. Eventually, as you develop your skill, you will be able to estimate the relative values of various positions.

Let's go back to the games of Diagrams (A) and (B) for a few simple examples. In Diagram (A), consider the Black star consisting of the two adjacent edge cells 19 and 20. Although it appears to raise Black's score by two points, it is really worthless!! That is because having an extra star subtracts two points from Black's score and thus cancels the apparent gain.

Notice, however, that in the game depicted in Diagram (B), White's two-point star connecting edge cells 4 and 13 is not worthless: it separates two Black stars, thus decreasing Black's score.

Neither is Black's two-cell star containing edge cells 1 and 20 worthless: it owns a corner edge cell and leads to Black's getting an extra point—the tie-breaking point, it turns out! So you can see there are many subtleties in evaluating positions. We hope that what we write below helps guide you.



### ➤ The Two-Way Stretch

One of the simplest but most fundamental tactics is the two-way stretch. In Diagram (C), we show its most elementary form. White's two stones are as good as connected by the two-way stretch (A, A), because if Black plays in one of the two cells marked A, then White can play in the other to connect the stones.



*Diagram (C)*

Regions connected to the central star-bridge by two-way stretches are also connected to each other. In Diagram (D) below, Black and White both have a connection via the bridge.



*Diagram (D)*

Although the two regions in a two-way stretch are usually adjacent, they need not be. In Diagram (E), White is connected to the edge with the split two-way stretch (A, A), together with the two-way stretches (B, B) and (C, C). This is an example of a pairing strategy, our next topic.



*Diagram (E)*

➤ **Pairing Strategies**

In a pairing strategy, moves are paired. If your co-player plays in one cell of a pair, you play in the other.

Pairing strategies are useful for convincing yourself that something is possible. They do not necessarily represent the best way of playing. Typically, a game ends when both players see pairing strategies that determine the outcome in all contested situations.

For example, the game of Diagram (A) might have stopped at the point shown in Diagram (F) below. Here, if Black plays in any cell marked A, B, C, or D, White can defend by playing in the other cell with the same label. And if White plays in any cell marked E, F, G, or H, Black can defend by playing in the other cell with the same label. The final score will be the same as in the game of Diagram (A). (Note the many examples of two-way stretches.)



*Diagram (F)*

➤ **The Best Offense is a Good Defense**

There are no ties in \*STAR. No matter how the board is filled, one of the players will end up with a higher score than the other. Hence, if you can keep your co-player from winning, you yourself will certainly win—even though, during play, you may not

have the faintest notion of how that will come about.

This maxim—that the best offense is a good defense—reminds you to be aware of your co-player’s goals at every stage of play. Don’t focus too narrowly on your own threats, which can evaporate as your co-player blocks them.

If, however, you concentrate on countering your co-player’s possibilities, your own play will invariably be subtler and more powerful.

Of course, each of your moves should be as efficient as possible and aim at blocking the maximum number of your co-player’s threats. Hence the next dictum.

➤ **Be Relevant**

Powerful advice for finding the right move is: Your play must be relevant to all of your co-player’s threats. In Diagram (G), Black and White are both trying to connect their respective stones. It is White’s turn. If it were Black’s turn, Black could easily connect. Two of Black’s threats are:

- (a) a play at F with a connection via the two-way stretch (C, X);
- (b) a play at D with a connection via the two-way stretches (A, X) and (G, H).



*Diagram (G)*

What should White do to prevent Black from connecting?

In order to be relevant to (a), White must play in F, C, or X. In order to be relevant to (b), White must play in one of the five cells: D, A, X, G, or H. There is only one cell in both of these lists, namely X. Any other move by White will allow Black to connect.

After playing X, White can connect the White stone at upper right to the lower White group via the pairing strategy (A, D), (C, F), (B, E).

### ➤ **Waste Not, Want Not**

This is a concept even more vital in \*STAR than it is in real life. Consider the situation shown in Diagram (H). White wants to connect the White stones.

There are three moves White could use, A, B, or C. Which is the best? Which is the worst? If you think it doesn't really matter, you will find that other players always seem to be "luckier" than you!!

White's worst move is A, because Black can threaten the two-way stretch (B, C) by playing at B, forcing White to play at C. Now Black's group touches E, which it had not before. It extends Black's range of influence.



*Diagram (H)*

The best move for White is B. Black then cannot gain any advantage by threatening the two-way stretch (A, C). And White's group is now touching D, which before it did not. Thus it extends White's influence. Playing at C makes the connection but does not extend White's range of influence.

But Black cannot extend its influence either by threatening the connection. Therefore, White's play at C would be intermediate between the extremes.

You may think the above differences are very slight. You may not see how they could possibly affect the game. Yet it is characteristic of \*STAR that a crucial encounter often happens where you least expect it, and even such small differences as these may determine the outcome.

So make it a habit not to waste any of the potential in your moves. When you consider a move, make sure there isn't another move that will accomplish the same thing and something else, however slight, besides.

### ➤ Double Trouble

Another fundamental of good play is that each of your moves should pose threats at more than one place. You will thereby be giving your co-player double trouble.

In Diagram (I), we give an example. Here White wants to connect groups at the top and bottom while Black wants to connect groups at the right and left. It is White's turn. Where should White play?

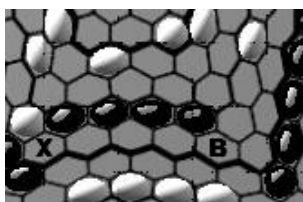


Diagram (I)

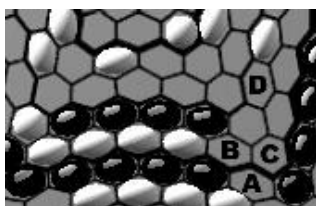


Diagram (J)

If White plays at X, then the merry chase that you see in Diagram (J) might follow (unless White gets wise first).

*Text continues on page 16*

[centerfold: board diagram with cell names]

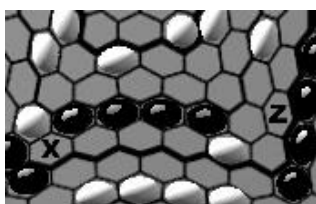
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*Continued from page 13*

In the situation shown in Diagram (J), White must play in A to keep Black from connecting. But then Black plays B and connects at C or D. So, clearly, the move X was wrong for White. It posed only a single threat to Black and was easily countered.

Let's start again with the situation in Diagram (I). The correct move for White is the more subtle move at B, so the situation changes to that shown in Diagram (K).



*Diagram (K)*

Now White threatens to make the connection to the upper group with a play at Z, so Black must respond there. But White's move also has reference to the merry chase of Diagram (J). Now when White plays at X, the chase will end in White's favor. White's move at B gave Black double trouble.

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### ***Going On***

We shall stop our short guide here. But we hope that your appetite has been whetted, and you will want to learn more about \*STAR. We strongly recommend the references given on page 18 for more in-depth discussion of strategy and tactics, recorded games between experienced players, and information about tournaments and history.

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## HANDICAPPING

\*STAR is a deep game, allowing many levels of skill. A game between players at very different levels does not have the same excitement as a game between equals. Fortunately, in \*STAR, balance can be easily achieved without distorting the game.

One way of balancing is to allow the weaker player to place a certain number of stones on the board at the outset, then proceed with the game.

Another way is to allow the weaker player a certain number of extra points while subtracting the same number of points from the stronger player (so as to keep the total combined score equal to 51).

When there is a very large difference between the players, the stronger player may give advice in addition to the balancing methods suggested above.

If the players are almost but not quite equal, then the weaker player takes first turn. However, if they are very close in skill, then the so-called "pie" rule may be used.

The name of this rule refers to a fair way of dividing a pie: One person cuts it in half and the other has first choice of a piece.

As applied to \*STAR, one player selects a first move for the other, who may accept it, and then the game proceeds, or may reject it and give it back as the co-player's first move, and then the game proceeds.

Two nearly equal players may want to play several games in which they alternate first turn.

Underlying our remarks above is the fact that we can prove that, in \*STAR, with correct play, the first player can always win. But the proof gives no hint as to what the correct play is.

Having a number of stones of their color on the board at the outset will always help a player.

Just what starting positions are best to balance the game for a weaker player is not yet established. A reasonable choice would be S60, A60, \*60, T60, R60, S30, A30, \*30, T30, R30, in that order, depending on how many stones are necessary. (See \*STAR Notation, page 20, for an explanation of these symbols.)

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## REFERENCES

Here are some references that you may find useful in learning more about the history of \*STAR and in developing your skill.

### *On the Internet:*

[http://ea.ea.home.mindspring.com/\\*Star.html](http://ea.ea.home.mindspring.com/*Star.html)  
or type in Ea Ea \*STAR in Google. Here you will find a wondrous wealth of material: a history of \*STAR and its ancestors, Poly-Y, Y, and STAR; a superb guide to strategy and tactics written in proverb form modeled upon that in the *Mudcrack Y and Poly-Y* book (see below); and a game played in QuickTime, all presented by the inventor himself.

Ea expresses \*STAR scoring in whimsical language. Thus, he refers to edge cells as *pericells* (as in perimeter). And each edge cell is imagined to contain a *peri*, a beautiful

supernatural being of ancient Persian folklore formed of fire. In \*STAR, the fires of two or more peries merge to form a *star*. Each corner edge cell is imagined to contain a *quark* as well as a peri. A peri that doesn't belong to a star is called a *spark*.

### **Books**

*MUDCRACK Y AND POLY-Y*, by Craige Schensted (now Ea Ea) and Charles Titus, originally published by NEO Press of Peaks Island, Maine, is now distributed by Kadon. It contains rules for both Y and Poly-Y, pages of boards on which the two games can be played with pencils of two different colors, a history of connection games, examples of well-played games, and an extensive series of proverbs guiding readers to the strategy and tactics of good play. Most of these apply to all the games of connection invented by Ea Ea and Charles Titus.

### **Magazines**

*GAMES Magazine*, Sept. 1983, page 51.

The game of STAR and its inventor, Craige Schensted (now Ea Ea), are introduced by R. Wayne Schmittberger in an article entitled "STAR, A Game Is Born: Craige Schensted writes on STAR strategy." [STAR is the immediate ancestor of \*STAR.]

*GAMES Magazine*, June 2000, page 10.

R. Wayne Schmittberger reviews "The 20th century games most likely to last a millennium" in an article entitled "Making Connections." Y, Poly Y, and STAR, the ancestors of \*STAR, are featured. [The Game of Y has been produced and sold by Kadon Enterprises, Inc., since 1993.]

## **\*STAR NOTATION**

### ***How to record moves***

A notation for specifying cell positions is vital if you want to record games or to participate in long-distance games by email, Instant Messaging, phone, etc.

Below we describe a three-symbol address for each cell of the board. Please refer to pages 14-15 for a diagram of the full board, showing each cell labeled with its unique address.

The first symbol, which is one of the following -- \*, S, T, A, R -- identifies in which of the five sectors of the board the cell is located.

Each sector is bounded by two "rays" that emanate from the points of the star bridge at the center and pass through the corner cells.

The second symbol in a cell address is a number specifying the "ring" in which the cell is located, counting from the center --- 1, 2, ..., up to 10 for the outermost, except that 10 is replaced by the single digit 0.

The third symbol is a number, 0, 1, 2,.. telling how far the cell is from one of the boundaries of its sector (the boundary to the left as you face the edge of the board from the sector).

The corner cells of the tournament board all have 00 as the second and third symbols in their addresses.

You may also find this notation system useful for recording puzzle solutions.

## VARIATIONS

*to play on the \*STAR board*

### *Nobridge \*STAR*

In Nobridge \*STAR the special star-shaped region at the center of the board is a region to be played in by either player, like any other region. Once one player has occupied it, the other player cannot play there.

### *Star Y*

Star Y is played on the full \*STAR board, and the two players take turns placing one stone at a time, trying to form a "Star Y". Stones once placed remain in place throughout that game. Only one stone may occupy a cell.

A Star Y is a series of connected cells occupied by one color, which touches at least three edges—two of which are adjacent and the third is not adjacent to either of those two.

As in Nobridge \*STAR, the special star-shaped region at the center of the board is to be played in. There are five possible orientations for a Star Y.

When the board is completely filled in with two colors, there will be a Star Y in one (and only one) color.

Thus there is always a winner, and if you can keep your co-player from making a Star Y, then you will certainly make one yourself, even if you don't see how that will happen.

For people who like simplicity and elegance, Star Y has almost the simplicity of the original Game of Y and, in Ea Ea's opinion, greater elegance.

### *Double \*Star*

Double \*STAR is like \*STAR except that on each turn a player places *two* stones on any two unoccupied cells of the board (except the bridge). On the first turn, the first player places only one stone.

Double \*STAR is a noble game with a fascinating situation called Limbo. For more on Double \*STAR see Ea's website at [ea.ea.home.mindspring.com/\\*DoubleStar.html](http://ea.ea.home.mindspring.com/*DoubleStar.html)

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## **ACKNOWLEDGMENTS**

The evolution of the \*STAR board and rules was an awesome process of collaboration and deliberations between inventor Ea Ea and an expert group of game enthusiasts. Mark Thompson inspired the work by wanting to run tournaments of STAR, a predecessor of \*STAR, and by wanting to have nice sets to give as prizes. Mariah Williams and R. Wayne Schmittberger added wisdom and constructive ideas.

Our special thanks go to Irene Schensted, who edited Ea's draft rules manuscript into the concise instruction book you now hold in your hand, and Mark Thompson for fine-tuning the text. Graphic design by Kate Jones, who has been involved in all aspects of the evolution of \*STAR.

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If you have any questions about any part of this game or this book, please contact us at:

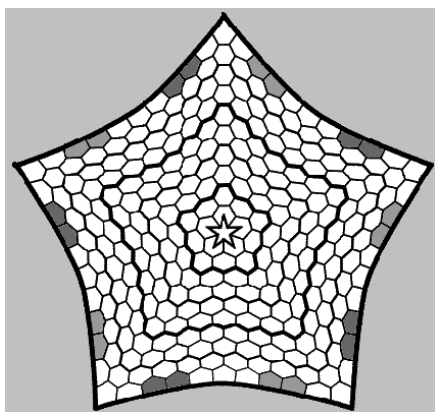
Kadon Enterprises, Inc. - [kadon@gamepuzzles.com](mailto:kadon@gamepuzzles.com)  
1227 Lorene Drive, Suite 16 -- Pasadena, MD 21122  
[www.gamepuzzles.com](http://www.gamepuzzles.com)

## Other games...

### PENTA-LINE

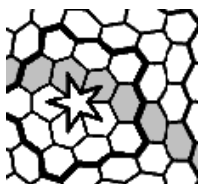
*A game of movement for two players  
adapted by Kate Jones*

*Start:* 10 stones for each player, arranged on the board's outer edges as shown:

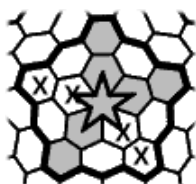


*Goal:* To form a connected string of 5 stones in a single row.

*Play:* Take turns moving one stone any unobstructed distance along a continuous row of spaces (like a queen in chess). "Continuous" means entering and exiting spaces on their opposite sides (see sample below left). Through the central star bridge, a path may continue along either fork on the other side (shaded spaces), but not turn a sharp corner (cells marked with X):



*A continuous row*



*Paths across the star bridge*

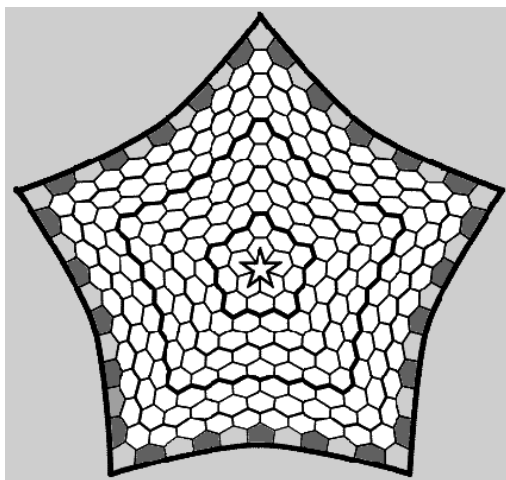
There is no capturing. However, you can use your five extra stones for blocking.

*Winner:* The first player to form a string of five stones wins.

## PENTA-HEX

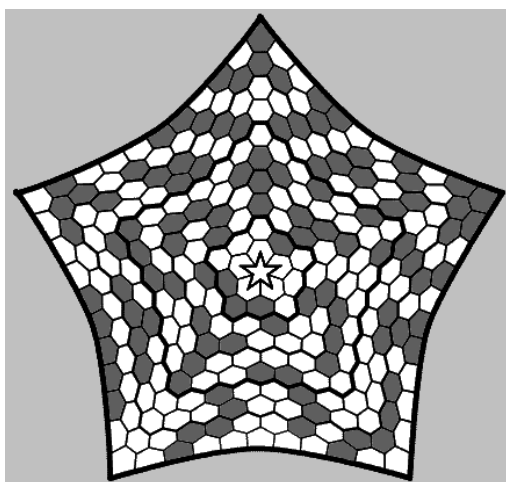
*A game of movement for two players  
by Kate Jones*

*Start:* Alternate 25 of each player's stones around the perimeter of the board:



*Starting position*

*Goal:* To be the first player to group the 25 stones into five separate and different shapes of 5 joined cells (pentahexes). There are 22 distinct shapes, not counting mirror images and varying positions and orientations on the board:

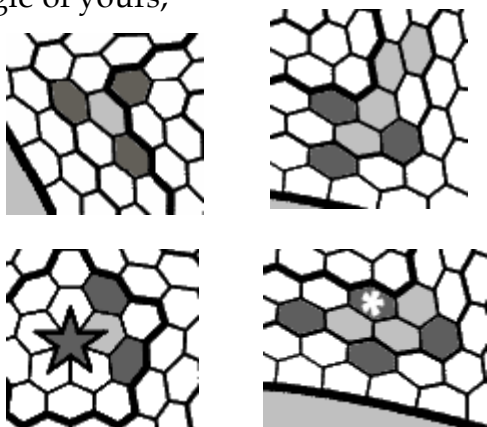


*Form any 5 of these 22 pentahexes*

*Play:* Take turns moving one stone like a chess queen any unobstructed distance in a single row (as for Penta-Line).



*Relocating:* When you move a stone next to a co-player stone that already has two of your stones flanking it so that the co-player's stone becomes enclosed by a triangle of yours,



*Examples of enclosing positions*

you lift the enclosed stone and return it to the outermost edge of the board. Even the central star may serve as a flanking space (lower left above). More than one stone can be enclosed and relocated on the same move, as in the last example above, where the stone marked with an asterisk just arrived there and completes two triangles.

A stone that is part of a completed pentahex may not be flanked and relocated.

A stone may move safely into an empty space already surrounded by a triangle of the co-player's stones. Only the enclosing move counts for relocating.

*Contact rules:* A player's completed groups may not touch each other. Different-color groups may touch, unless players agree to play with total separation.

*Preempting:* Once a player has formed five stones into a pentahex, neither player may form that shape again. Its owner may, however, rearrange it and thereby free up its shape for either player to build.

## SOLITAIRES

### *How Many Queens?*

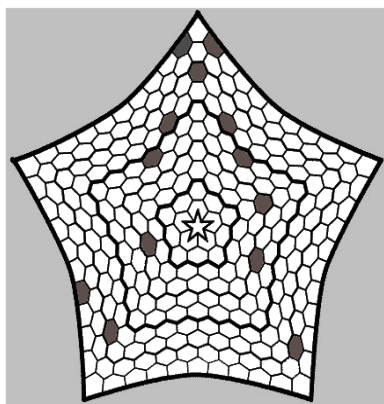
Place as many stones as possible on the spaces of the \*STAR board so that no two are in the same row in any direction. A row is defined as any line of cells connected along their opposite edges. At the center star, a path may continue along either “fork” on the other side but not double back on itself nor make a sharp turn.

This puzzle derives from the “8 Queens on the Chessboard” problem. The other rule is that every empty cell is already in the same row with a stone already on the board.

Below is a solution with 13 “Queens,” where no two are in the same row and where every empty cell is under guard (intersected) by at least one stone on the board.

We know a solution exists with 17 Queens. Can you find it? Can you do it with more? If you find a solution with 18 or more, let us know!

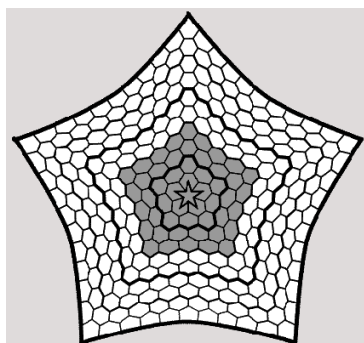
Can you find a solution with the *least* number of Queens on the board so that all unoccupied cells are under guard? We know 12 is possible. Is there an 11? If you find fewer than 12, let us know!



*13 Queens on the \*STAR board*

### ***Supply Line***

Fill every cell of the order-5 pentagon at the center of the board with stones of one color, including the central star.



*Start position for Supply Line Solitaire*

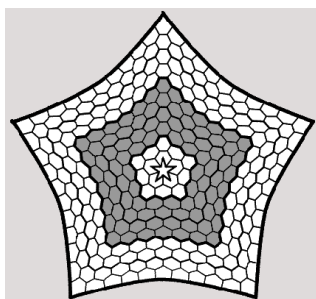
Jump stones over each other as in checkers or Chinese checkers, removing every stone jumped over. Jump one stone at a time, to an empty space immediately on the other side of it. Across the star bridge in the center, you may jump to either fork (see page 23). Remove all but one stone, landing the last stone on the edge of the board.

### ***Ring Solitaire***

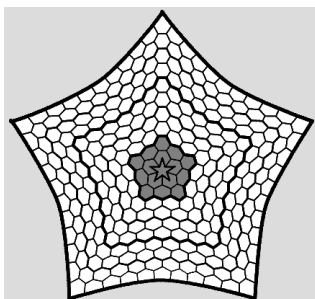
Fill the middle ring of the \*STAR board, as shown below left. Jump as for Supply Line, landing the last stone on the center star.

### ***Mini-Solitaire***

Fill just the central pentagon, jump as for Supply Line and end your last stone on any cell: center, corner, middle of side. Can it end adjacent to the star?



*Start position for  
Ring Solitaire*



*Start position for  
Mini-Solitaire*

**Contents:**

*\*STAR gameboard*

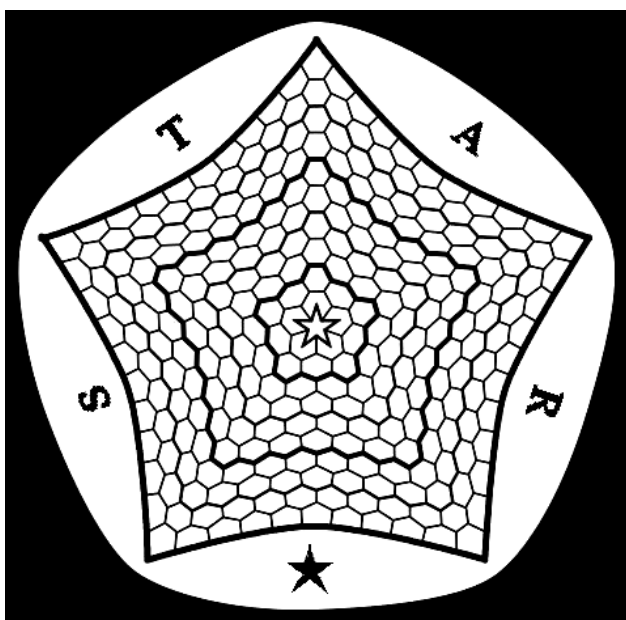
*140 glass marbles in each of 2 colors*

*Instruction book*

*Custom-made fabric pouches*

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# **\*STAR**



*from Kadon*

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### Cell notation

Please see page 20 for explanation.

