## Zeno's Tavli

A game for 2 players

Equipment: 15 checkers for each player (black and white), 3 dice, 1 game board.
The game board consists of three parallel rows of 12 squares. Separating symbols divide the rows into boards of six squares each.

## Game Setup

On the screen, you can see the board in plan view. On the right are the 15 white checkers. Your opponent or the computer plays with the 15 black checkers. By clicking with the cursor you can select a checker and drag \& drop it onto the corresponding square. The three dice are also thrown by clicking with the cursor. The screen shows both the squares that can be reached and the dice that can be played.

| 2nd board |  |  |  |  |  |  | 1st board |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 | 11 | 10 | 9 | 8 | 7 |  | 6 | 5 | 4 | 3 | 2 | 1 |
| o | o | o | o | o | o | $\cdots$ | O | o | o | o | o | o |
| 12/13 | 11/14 | 10/15 | 9/16 | 8/17 | 7/18 | - | 6/19 | 5/20 | 4/21 | 3/22 | 2/23 | 1/24 |
| o | o | o | o | o | o | $\bigcirc$ | O | o | o | o | o | o |
| 13 | 14 | 15 | 16 | 17 | 18 |  | 19 | 20 | 21 | 22 | 23 | 24 |
| 3rd board |  |  |  |  |  |  | 4th board |  |  |  |  |  |

## Objective of the game

The objective of the game is to move your 15 checkers through the 24 houses of the two outer rows of the board (from square 1 to 12 and 13 to 24 ). The winner is the player who first manages to remove all 15 of his own pieces from the board after having assembled them in the last quarter (squares 19 to 24 ).

## Game play

As you can see on the screen, at the beginning of the game the pieces are outside the board. The player with the white checkers, you!, starts the game. Then the players take turns in rolling the dice and moving their checkers.

The game consists of two phases. In the first phase, both players must place all their 15 pieces in the first board (squares 1 to 6 , on the top right of the screen). Only then can they advance to squares 7 to 24 . The checkers can therefore only move in one direction and counterclockwise.

The player rolls the three dice by clicking on them with the cursor. According to the roll of the dice, he moves one, two or three of his checkers. To do this, click on a selected checker and drag it to the selected square. Then it is the opponent's turn.

The following general rules apply for the moves:

1. The numbers rolled can be attributed to a single checker but can also be distributed among different checkers. Example: After a roll of $2+5+6$, either one checker can move 13 squares, or one checker can move $2+6=8$ squares and the third one 5 , or one piece can move 2 , another 5 , and the third 6 . The order in which the checkers move is up to the player.
2. The numbers rolled must be used separately and must not be added. If a checker is to move twice, it must move each number individually, according to our example first the 2, then 5 (and not just 7) or first the 6 and then 2 (and not just 8 ) or in another order. If one or more numbers cannot be drawn legally, they expire.
3. Doubles: In a doubles (= two equal numbers) the numbers are played twice, e.g. a doubles of four $(4+4)$ results in $4+4+4+4$. Three equal numbers correspond to 3 doubles (dice $\mathrm{A}+\mathrm{B}, \mathrm{A}+\mathrm{C}, \mathrm{B}+\mathrm{C}$ ), so that the number can be moved 12 times.
4. There is no limit to the number of checkers that can occupy a square at any given time. No square is ever occupied by checkers from both players simultaneously.
5. A checker can only move to a square that is or unoccupied or is occupied by one or more of the player's own checkers. It may also land on a point occupied by exactly one opposing checker, or "blot". In the latter case, the opponent's checker is hit. Two stones of the same colour on one square are protected from being hit and block the square for the opponent.
6. Re-entering of hit checkers: A captured checker is placed on the directly adjacent point in the middle row. It must first be re-entered from there before other checkers can be moved. If the checker cannot be re-entered because the squares indicated by the dice roll are occupied, the player loses his turn.

Example: A checker was hit at the 4th square and is placed to the 4th point of the middle row. With 2 it can be re-entered to the 5 th square, a 6 would bring it to the 9 th square. A checker that is hit on the 21st square also goes to the 4th point of the middle row and must be entered in the same way, i.e. start again at house 4 . This means that the further a stone had moved forward when it is hit, the longer the path is that it has to take again.

During the first phase, when players bring their checkers into play, the following modifications to these rules apply:

1) A checker can only be moved onto an unoccupied square or a square occupied only by one's own pieces. Single counters ("blots") block a square and are not hit!
2) The entry takes precedence over the move. Only if a die result does not allow a checker to be introduced may a checker be moved within the $1^{\text {st }}$ board, but not beyond square 6 .
3 Once a player has introduced all of his 15 checkers and has moved out of the $1^{\text {st }}$ board, his "blots" in the $1^{\text {st }}$ board may also be hit.

The following rules apply to the bearing off of checkers:
As soon as a player has assembled all his own checkers in the last board (squares 19 to 24 , at the bottom right of the screen), he can begin to bear them off the game. The player may remove one stone at a time from the square corresponding to the number of points rolled. Example: After throwing $4+2+1$, a checker can be removed from the $21^{\text {st }}$ square (the fourth but last square or fourth square counted from the edge of the board), one from the $23^{\text {rd }}$ square (the second but last square or second square counted from the edge of the board) and one from the $24^{\text {th }}$ square (the last square or first square counted from the edge of the board). The removed checkers appear next to the board. Alternatively, a checker can also move forward within the board without being removed.

If there is no checker on a square corresponding to the number of dice and there are no more checkers on higher squares, a checker may be removed from the next lower occupied square. Example: A 4 was rolled, but there is no checker on the $4^{\text {th }}$ but last square (square 21 ). But if there are still checkers on 20 or 19 , a checker from there advances four squares. However, if there are no checkers left on 20 and 19 either, a checker from square 22 ( $3^{\text {rd }}$ but last) can be removed with 4 . If 22 is not occupied, a checker can be removed from house 23 and so on.

If a checker of the removing player is hit while bearing off, he may not continue to bear off his checkers until the captured checker has been re-entered and reached the last board.

## End of the game

The first player to remove all his 15 checkers from the game board is the winner.

## Our proposals for the rules

We based our rule set on a poem by Agathias of Myrina (Anthologia Graeca IX, 482), in which he describes an alleged game of the Byzantine emperor Zenon (5th century AD). From his description, it can be seen that the game board consisted of exactly 24 squares, that both players had 15 checkers black and white, which moved in the same direction, and the game was played with 3 dice. Further details reveal that it must be a game from the backgammon family. Until Byzantine times, however, Roman game boards of this type usually consisted of three instead of two rows of two times six squares. The middle row often differs from the two outer rows. We have therefore devised a special function for the middle row. Otherwise, we oriented ourselves to the rules of the medieval German game "puff".

Agathias ends the poem with the recommendation "Tablên pheugete pantes". Whether "tablê" here simply means "board game" or "game board" or indicates the name of the game cannot be decided. Therefore, the sentence can be translated as "Avoid all the board game" as well as "Avoid all the tavli game".

## Further reading

Ulrich Schädler, XII Scripta, Alea, Tabula - New Evidence for the Roman History of "Backgammon", in: Alexander J. de Voogt (ed.), New Approaches to Board Games Research, Leiden 1995, p. 73-98.

Ulrich Schädler, Du 36 cases au backgammon, in: Isabelle Bardiès-Fronty, Anne-Elisabeth DunnVaturi (éd.), Art du jeu, jeu dans l'art, Paris 2012, p. 146-149.

Ulrich Schädler, Zwischen perfekter Balance und Hochspannung - die Geschichte des Backgammon im Überblick, in: U. Schädler (Hrsg.), Spiele der Menschheit. 5000 Jahre Kulturgeschichte der Gesellschaftsspiele, Darmstadt 2007 (= Jeux de l'Humanité. 5000 ans d'histoire culturelle des jeux de société, Genève 2007), p. 31-41.

Véronique Dasen (éd.), Ludique. Jouer dans l'Antiquité, catalogue de l'exposition, Lugdunum, musée et théâtres romains, 20 juin-1er décembre 2019, Gent, 2019.

