## MORRIS

2 players / 20 minutes / 9 years and older

Morris, also known as Mill or Cowboy Checkers, is a classic game that can be traced back to at least Ancient Rome. There are many variations in the shape of the board and the number of pieces used, especially the Nine Men's Morris, which was very popular in medieval Europe. In the following, first explain Nine Men's Morris, and then introduce some of the variant rules.

## COMPONENTS

Nine Men's Morris uses the board shown below and nine pieces of each of the two colors. In the general rules, diagonal lines are not used.

(Fig.1) The board used in Nine Men's Morris. The classical rules do not use diagonal lines.

## PREPARING

Decide the order of play and the color of the pieces to be used by each other in any appropriate way, and then receive all the pieces to be used by each player.

## GAMEPLAY

The board is initially empty. Players take turns, starting with the first player, to place one piece of their color on the board at each intersection of the grid.

If a player's piece is lined up in three vertical or horizontal lines (called "mill"), that player chooses one of the opponent's pieces on the board and removes it from the game. However, you cannot take a piece from your opponent's "mill" as long as there are other pieces you can take.

On your turn after placing all your pieces on the board, you move one of your pieces on the board to the next intersection. If the move results in a "mill", the opponent's piece is still removed according to the rules.

(Fig.2) The player of light color who made a "mill" by moving the rightmost piece may choose any of the dark color pieces indicated by the yellow dots to remove. It cannot be removed from the mill of the dark color on the bottom row.

## GAME END

The player who reduces the opponent's pieces to two or makes the opponent unable to move wins the game.

## STRATEGY AND OPTIONAL RULES

The shortcut to victory is to create a position that allows you to repeat the process of collapsing your "mill" once it has been created by a move, and then returning to the same position again on the next turn to create a mill. Some people think that defeating your opponent with such repeated mills is the most exciting part of the game, but sometimes a rule is taken that forbids you to bring back a mill on the next move once you have broken it.

Nine Men's Morris is a solved game, and analysis has shown that if both players always make perfect moves, the game will fall into a cycle and result in a draw. Such a tie can also occur in human play.

The classic rules do not use diagonal lines, but there are rules that allow diagonal moves (but not diagonal mills). I recommend this rule.

There seem to be two different rules when two mills are made at the same time: (1) remove only one of the opponent's pieces (2) remove two of the opponent's pieces.

## VARIANT: Six Men‘s Morris

This is a variant that uses six pieces each. The board uses only the two inner squares (16 intersections). The rest of the rules are the same as in Nine Men's Morris.

## VARIANT: Twelve Men's Morris (Morabaraba)

This variant uses 12 pieces each. In addition to the Nine Men's Morris board, it uses diagonal lines, along which you can move and mill diagonally. If, during the placement phase, neither player places a piece on all intersections without taking an opponent's piece, the game is a draw.

Please Turn Over $\Rightarrow$

## Variant: "Stacking Morris"

This is a Kanare_Abstract original variant that are based on Nine Men's Morris but uses a stacking mechanism.

## DEFENITION

In the following, a stack always refers to a two-height stack consisting of two colors (no other stacks are created in this game). A singleton refers to a piece that is not a stack on the board.

## RULES

The basic rules are the same as in Nine Men's Morris, but in this game, you can move along diagonal lines and make a mill on a diagonal line.

## STACKING

The player who makes a "mill" during the game chooses one of the opponent's singletons on the board and puts it under one of pieces of the mill to make a stack. The stacks are owned and controlled by the player who has placed the top piece. Whenever you move a stack, you move the entire stack and cannot separate two pieces.

## MILL USING A STACK

You cannot make a mill using your singleton and your stack. On the other hand, your opponent can use the first level of your stack with his or her singleton to make a mill.

(Fig.3) Not a Mill

(Fig.4) A Mill for light color
one of your opponent's singletons under one of your singletons of the mill according to the rules described above. If the mill contains two of the opponent's stacks, you can choose one of them and turn it over.

(Fig.5) An example of mill processing using an opponent's stack. First, reverse the top and bottom of the opponent's stack, and then put one of opponent's singletons underneath one of your singletons in the mill.

Sometimes your own Mill may be created by the opponent's move or by processing the opponent's Mill. If you have your own Mill at the start of your turn, you perform the same process as if you had created your own Mill, and then perform your turn as usual.

If two mills are created at the same time, only one of them is processed. If your mill is still left at the beginning of your next turn, you process the mill in the same manner as above and then make your normal turn.

## GAME END

The player who makes a mill that consists of three of their own stacks immediately wins the game. This includes when this is accomplished as a result of using an opponent's stack to make a mill, or when it is accomplished by an opponent's move. Also, this winning condition by a mill made with three stacks takes precedence over all one-level mills.

(Fig.6) Win for the Dark

If you have made a mill using one of your opponent's stacks, you turn that stack over so that it is upside down, and then put

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