

Knight's Dance

Pieces and Board: Knight's Dance is played on a rectangular n rows by m columns board. Each player has a knight and a king. Your implementation must handle an arbitrary number of rows and columns. The default game has 5 rows by 6 columns with the configuration shown here.

To Move: The players, White and Black, take turns moving their knights by "L-shaped" moves as in chess. A player cannot land on her own king. Kings do not move.

To Win: The player who captures (lands on) her opponent's king *or* her opponent's knight wins. A situation where a player does not have any legal moves is a loss for that player. (I.e., if you can't move, you lose!) Ties are no possible, but some games may go on forever.

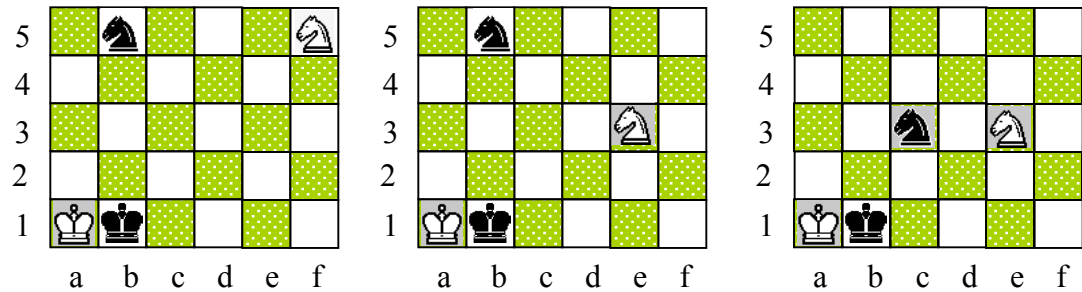
Compulsory Rule Changes:

- **Misère Rule:** The player who captures (lands on) her opponent's king or her opponent's knight *loses*. If you have no legal moves (e.g., you're blocked in), you win.
- **Jump-block:** A knight is blocked from jumping onto certain squares over pieces it is next to (see illustration).

Position Representation:

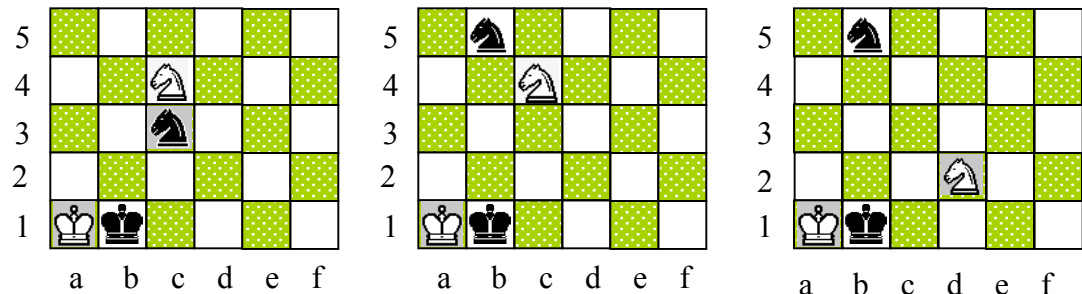
• $(T \#R \#C WK BK WN BN)$
 T stores whose turn it is (either B or W). $\#R$, $\#C$, WK , BK are fixed throughout a game and represent #rows, #columns, white's king, and black's king respectively. WN and BN store the slot of the white and black knight respectively. The slots are represented as in algebraic chess notation (see sample standard game): $\langle \text{column-letter} \rangle \langle \text{row-number} \rangle$, also known as $\langle \text{file} \rangle \langle \text{rank} \rangle$

Example game



White to move. \Rightarrow White to e3

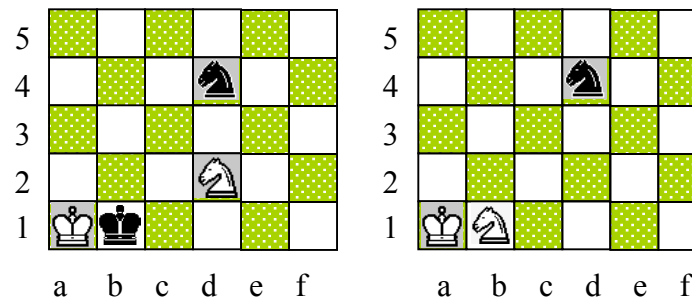
Black to c3



White to c4

Black to b5

White to d2



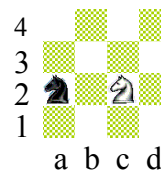
Black to d4

White to b1

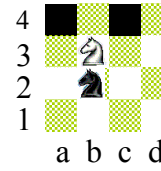
Default initial position:
 (w 5 6 a1 b1 f5 b5)

White wins by capturing Black's king.

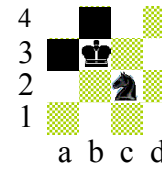
Jump-block compulsory rule illustration



No jump blocks since two pieces not next to each other.



White blocks Black's jumps to a4 and c4.



Black Knight's jumps to a3 and b4 blocked by own king.