

Chess Capture Digraphs

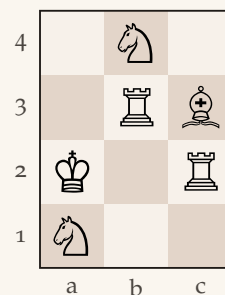
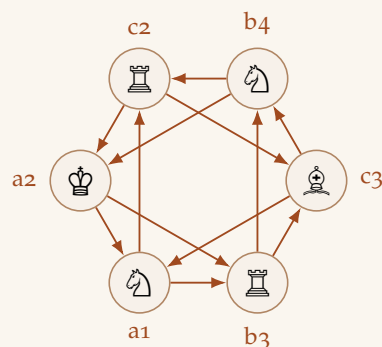


September 2026

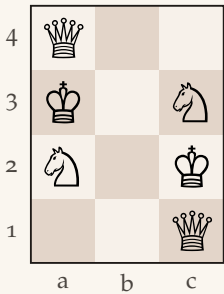
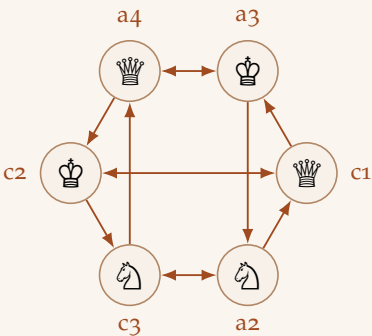
From Erich Friedman's *Math Magic* (October 2013). Each digraph below is to be drawn by chess pieces on a board, one piece for each point, following these rules.

- The pieces are kings, queens, rooks, bishops and knights, with no pawns. Any number of each may be used.
- Colour is ignored, so any piece can attack any other.
- There is an arrow from one piece to another exactly when the first attacks the second: every attack is an arrow and every arrow is an attack.
- A piece attacks another if it could move to that square in one move. So a rook, bishop or queen attacks only the first piece in each direction, and a king or knight cannot be blocked.
- In these digraphs each piece attacks exactly two others and is attacked by exactly two.
- The board may be any rectangle, and the aim is the smallest area.

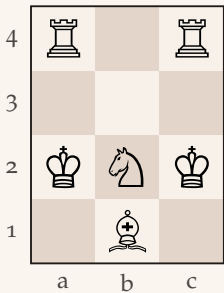
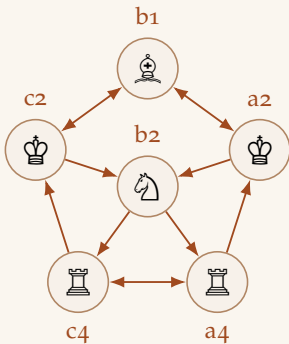
In each figure the digraph is drawn as on Friedman's page, with the piece and its square at each point.



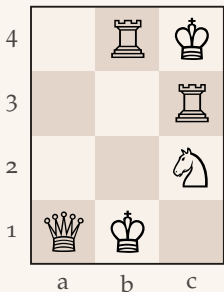
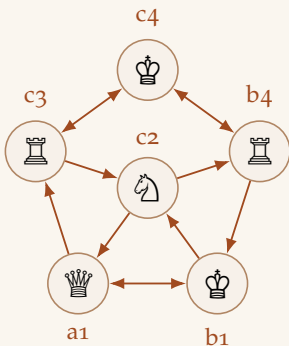
Digraph u, marked as having no position, on a 3×4 board.



Digraph h on a 3×4 board (the page shows 4×4).



Digraph k on a 3×4 board (the page shows 5×3).



Digraph l on a 3×4 board (the page shows 4×4).

Found on 27 September 2026 with an AI-assisted search. Each position was checked square by square against its digraph by a separate program, and each board against every smaller board.