4 CHESS SYMMETRY AND TRANSFORMATIONS

Chess pieces **translate** around the chessboard trying to capture the other player's king.

The **basic moves** are:

The King (K)
Although he is the most important piece, can only move **one square** in any direction.

Pawns (P)
Usually translate one square forward into an empty square, but they can translate one square diagonally if they are going to take one of the other player's pieces.

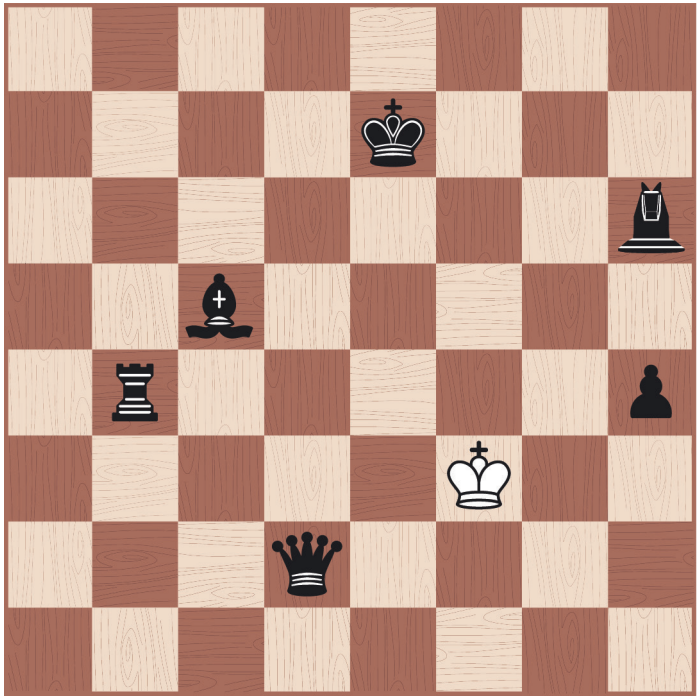
Rooks (R)
Can translate horizontally or vertically until another piece blocks its path.

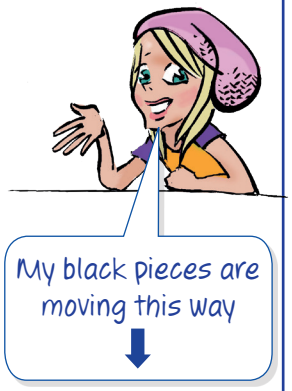
Bishops (B)
Can translate diagonally in any direction until another piece blocks its path.

The Queen (Q)
Can translate horizontally, vertically or diagonally in any direction until another piece blocks its path.

The Knights (N)
Can translate 1 square horizontally and 2 squares vertically, or 2 squares horizontally and 1 square vertically.
A knight is the only piece that can jump other pieces.

1 On your copy of each board show **all** the moves each **black** piece could make.
Use the letters beside the name of each piece.
One move the King could make is shown.





2 If it is the white player's turn to move next, who will win? Explain how.

3 Practise these basic moves in a game of chess with a partner.

4 You may like to find examples of other game boards that use symmetry in their design.

4 CHESS SYMMETRY AND TRANSFORMATIONS - CHESS BOARDS