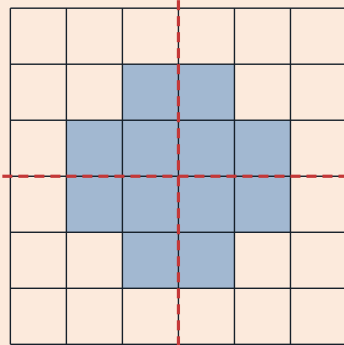


SQUARE TILE SYMMETRY

- 1 A builder cuts a square tile. Fold-lines through the middles of opposite sides give 2 lines.
- 2 Fold-lines along the two diagonals give 2 more lines.
- 3 Total lines of symmetry: 4.
- 4 Turning the tile, it matches every quarter-turn, so 4 times in one full turn. Order is 4.

WARM-UP

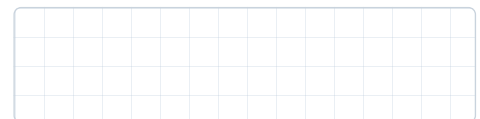
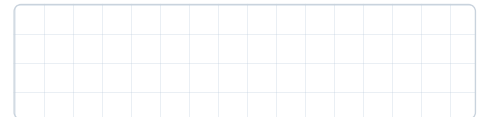
Complete the half-shaded grid so the whole pattern is symmetric.



1. Shade the matching cells so the finished grid has 4 lines of symmetry like the square panel
2. Mark the centre and check the pattern has rotational order 4 like the square card
3. Add fold-lines and confirm a second pattern on the grid shows 6 lines like the hexagon table top

PRACTICE

- 1 Ciara cuts a square wood panel for a model shelf. How many fold-lines does her square panel have?
- 2 Tom turns a square card while building a fort. How many times does the card look the same in one full turn?
- 3 Niamh makes an equilateral triangle flag for her den. How many fold-lines can she find on it?
- 4 The class builds a regular hexagon table top from card. How many lines of symmetry can they draw?
- 5 Sean spins a regular hexagon nut while fixing his model crane. How many times does it match in one full turn?



? ALWAYS, SOMETIMES, NEVER

Always, sometimes or never true? Write A, S or N.

- a. A square has 4 lines of symmetry
- b. An equilateral triangle has rotational order 3
- c. A rectangle that is not a square has 4 lines of symmetry
- d. A shape with exactly 1 line of symmetry has rotational order 2

