Reflection in the axes and lines of symmetry

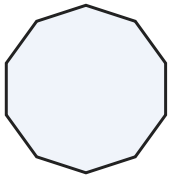
MODULE 8 · LOCATION, TRANSFORMATIONS AND SCALE SHAPE & SPACE

HOW TO ANSWER TODAY

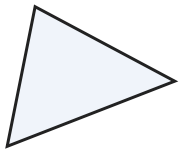
- **Lines of symmetry.** A line of symmetry folds the shape so both halves match. Count every direction that works.
  Square → 4 lines (2 middles + 2 diagonals) Equilateral triangle → 3
- **Transformations.** Slide without turning → translation. Flip (mirror) → reflection. Turn → rotation.
  Triangle slid left → translation Letter flipped → reflection

STRETCH PROBLEMS

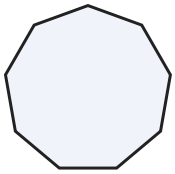
1. Aoife is helping to paint a banner for GAA finals day. The main shape on the banner is a regular decagon. How many lines of symmetry does a regular decagon have?



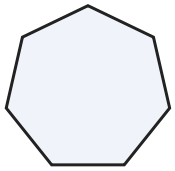
2. Saoirse chalks a scalene triangle on the yard beside the hopscotch squares. How many lines of symmetry does a scalene triangle have?



3. Aoife is decorating the 6th class door for Seachtain na Gaeilge. She cuts a regular nonagon from coloured paper to stick in the centre of the display. How many lines of symmetry does a regular nonagon have?



4. In art class, 6th class are making a scale drawing of the school yard. Saoirse draws a regular heptagon for the outline of a flower bed. How many lines of symmetry does a regular heptagon have?



5. In 6th class, Fionn is measuring out a homemade Snakes and Ladders board on the carpet. A shape on the carpet stays the same size and the same way up but is now in a new spot. Name the transformation described: translation, reflection or rotation?

SHAPE & SPACE