

Combining transformations

MODULE 8 · LOCATION, TRANSFORMATIONS AND SCALE REVIEW

HOW TO ANSWER TODAY

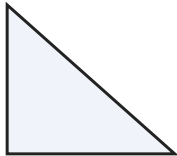
- **Transformations.** Slide without turning → translation. Flip (mirror) → reflection. Turn → rotation.
Triangle slid left → translation · Letter flipped → reflection
- **Lines of symmetry.** A line of symmetry folds the shape so both halves match. Count every direction that works.
Square → 4 lines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

★ STRETCH PROBLEMS

- 1 Saoirse is painting letters onto papier-mâché masks for the 5th class school play. She paints a letter d on a clear plastic sheet, then flips the sheet over to print it on a mask, and now the letter d looks like a letter b after the move. Is the transformation a translation, a reflection or a rotation?

Name the transformation described: the letter d looks like a letter b after the move. (Choose translation, reflection or rotation.)

2

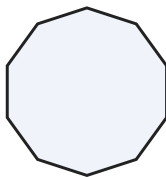


5th class are painting a triangular banner for the GAA finals day. The banner is shaped like a right-angled scalene triangle, with three sides of different lengths. How many lines of symmetry does the banner have?

- 3 Saoirse is painting letters on papier-mâché masks for the school play. She paints a letter d on one mask, but when she looks at it in the dressing-room mirror, the letter d looks like a letter b after the move. Is this a translation, a reflection or a rotation?

Name the transformation described: the letter d looks like a letter b after the move. (Choose translation, reflection or rotation.)

4



Mr Ó Briain's 5th class are painting a flower design on a new raised bed in the school garden. The flower's centre is a regular decagon. How many lines of symmetry does a regular decagon have?

- 5 Saoirse is designing a mosaic for the school library wall. She draws a tile pattern, then flips the shape across the vertical line through its centre to make the next tile. Is this transformation a translation, a reflection or a rotation?

Name the transformation described: the shape flips across the vertical line through its centre. (Choose translation, reflection or rotation.)