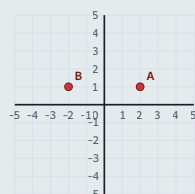


Combining transformations

MODULE 8 · LOCATION, TRANSFORMATIONS AND SCALE REVIEW

Transformations can be **combined** — for example a reflection then a translation. Do them in order, one at a time.



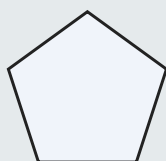
→ Translations, reflections and rotations all keep the shape the **same size**.

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

WARM-UP

1



Oisín cuts a regular pentagon shape from a cereal box for his junk-modelling project in 5th class. He wants to mark every line of symmetry on the pentagon before he folds it. How many lines of symmetry does a regular pentagon have?

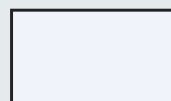
- 2 Saoirse is arranging papier-mâché masks on the stage for the 5th class school play. She moves one mask across the table so that the shape slides without flipping or turning. Name the transformation she has used (translation, reflection or rotation).

Name the transformation described: the shape slides without flipping or turning. (Choose translation, reflection or rotation.)

- 3 Tadhg is painting a banner for the GAA county finals. He uses a stencil of a Cumann na mBunscol crest and slides the stencil sideways across the cloth without flipping or turning it, so the next crest looks the same as the first. Name this transformation: translation, reflection or rotation?

Name the transformation described: the shape slides without flipping or turning. (Choose translation, reflection or rotation.)

4



Mr Ó Briain is showing 5th class the plan for the new school polytunnel, which is shaped like a rectangle. He asks the pupils to work out how many lines of symmetry the rectangle has. How many lines of symmetry does a rectangle have?