Simple grid references — finding a square

MODULE 8 · SYMMETRY, LOCATION AND TRANSFORMATION SHAPE & SPACE

HOW TO ANSWER TODAY

- **Transformations.** Slide without turning → translation. Flip (mirror) → reflection. Turn → rotation.
  Triangle slid left → translation · Letter flipped → reflection

STRETCH PROBLEMS

1. In 3rd class, Oisín draws a grid map of the school garden to show where each plant pot is for a soil investigation. The pot of cress is **8** squares across and **4** squares up from the corner of the grid. Write the pot's position as (across, up).

   On a grid, the boat is 8 squares across and 4 squares up. Write its position as (across, up).

2. Cian draws a treasure map on squared paper for a class game. He marks a kite shape that sits **3** squares across and **8** squares up from the corner. Write the kite's position as (across, up).

   On a grid, the kite is 3 squares across and 8 squares up. Write its position as (across, up).

3. In the after-school crafts club, Aoife sketches her kite design on a grid. The tip of the kite is **10** squares across and **6** squares up. Write the position of the kite tip as (across, up).

   On a grid, the boat is 10 squares across and 6 squares up. Write its position as (across, up).

4. Aoife is sewing letters onto bunting for the school summer fair. When she stitches a letter d but holds the fabric the wrong way round, the letter d looks like a letter b after the move. Is this 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.)

5. Ms Ní Bhriain draws a grid on the whiteboard to show where each act sits in the school music recital programme. The choir's act is marked **10** squares across and **4** squares up from the corner. Write its position as (across, up).