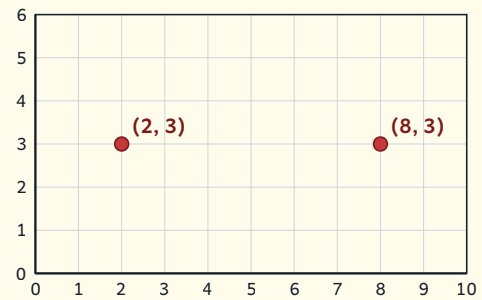
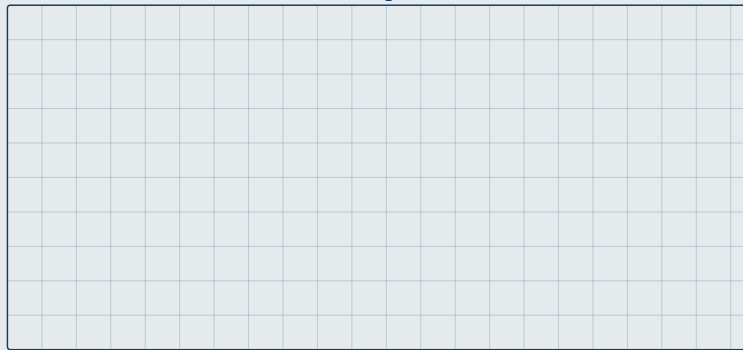


REFLECTING (2, 3) ACROSS $x = 5$

- 1 The vertical mirror line sits at 5. Start at the point (2, 3).
- 2 Count the gap to the line: $5 - 2 = 3$ squares left, so land 3 squares right: $5 + 3 = 8$.
- 3 A vertical flip keeps the height the same, so the image is at (8, 3).

**WARM-UP**

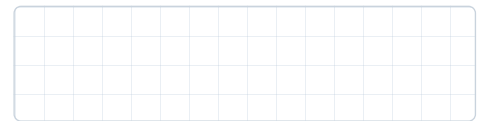
On the squared working space, plot and move these tiles yourself, reading across first.

Investigation

1. Draw a vertical mirror line at 5 across, then plot the tile (2, 3) and its reflection (8, 3).
2. Plot the tile (2, 4) and mark where it lands when reflected across the line at 5.
3. Plot the tile (2, 3), then slide it 3 across and 2 up and label its new reference (5, 5).

PRACTICE

- 1 A builder lays a blue tile 3 across and 2 up on the pattern grid. Write its grid reference, across first.

**? ALWAYS, SOMETIMES, NEVER**

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

- | | |
|--|---|
| a. In a grid reference the across number is written before the up number. ☐ | c. Reflecting a tile across a vertical mirror line changes its up number. ☐ |
| b. Sliding a tile 3 across and 2 up changes its up number. ☐ | d. The grid reference of a tile equals the reference of its reflection across a vertical line. ☐ |

REFLECT

Which move helped most in your design — a flip, a turn or a slide?