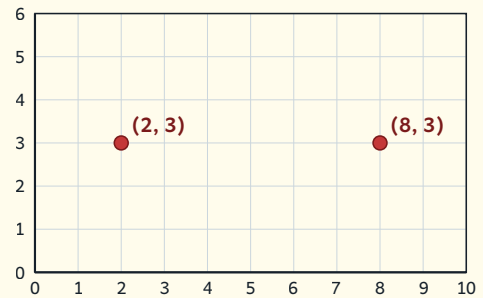


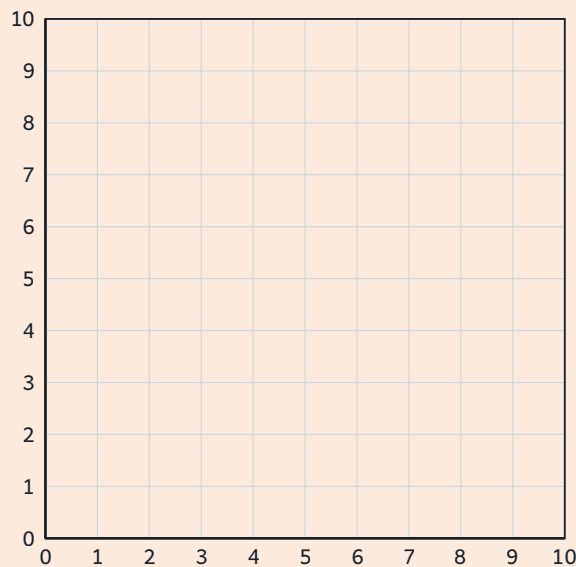
REFLECTING (2, 3) ACROSS $x = 5$

- 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

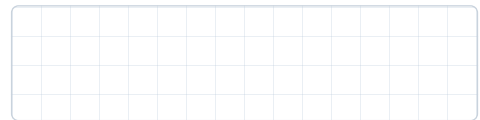
Use the coordinate grid to show the flips and slides from the lesson.



1. Draw the vertical mirror line at 5 across.
2. Plot and label the points (2, 3), (3, 4) and (4, 2), then mark each reflected point across the mirror.
3. From (1, 1) draw the slide 3 across and 2 up and label the new point.

PRACTICE

- 1 The next tile in the design sits 6 across and 4 up. 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. <input type="text"/> | c. Reflecting a tile across a vertical mirror line changes its up number. <input type="text"/> |
| b. Sliding a tile 3 across and 2 up changes its up number. <input type="text"/> | d. The grid reference of a tile equals the reference of its reflection across a vertical line. <input type="text"/> |

REFLECT

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