Movement on coordinate grids

6 questions | 10 marks

Equivalent correct methods earn the corresponding marks.

1. Start at (2, 3). Move 2 right. Give the new coordinates. [1 mark]

x becomes 2 + 2 = 4; y stays 3.

Answer: (4, 3)

2. Start at (4, 5). Move 3 down. Give the new coordinates. [1 mark]

y becomes 5 − 3 = 2; x stays 4.

Answer: (4, 2)

3. Start at (1, 1). Move right 3, up 4, then left 2. Find the endpoint. [2 marks]

(1,1) → (4,1) → (4,5) → (2,5).

Answer: (2, 5)

4. Give horizontal and vertical directions from A(2, 5) to B(6, 2). [2 marks]

6 − 2 = 4 right; 5 − 2 = 3 down.

Answer: 4 right and 3 down, in either order.

5. A robot moves right 2 and down 3, finishing at (5, 1). Find its start. [2 marks]

Undo down 3 by going up 3, then undo right 2 by going left 2.

Answer: (3, 4)

6. Two routes go from (1, 1) to (4, 3). A goes right 3 then up 2; B goes up 2 then right 3. Compare their lengths along grid lines. [2 marks]

Each uses 3 horizontal steps and 2 vertical steps: 3 + 2 = 5.

Answer: Both routes are 5 units long.