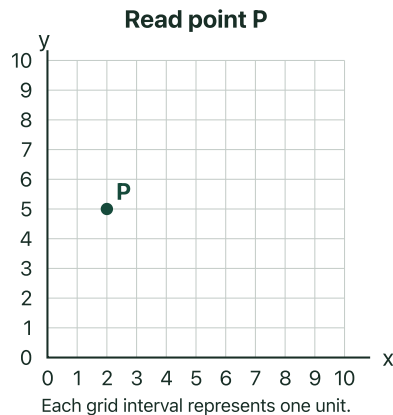


Coordinate Plane Practice

Compare your reasoning, not just the final result. Equivalent correct methods are welcome.

Public practice with published answers. This is not a full-topic readiness assessment.

1. Read the coordinates of P on the grid. Explain which coordinate you read first.



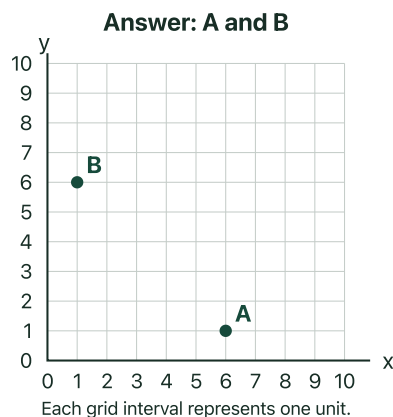
Worked solution 1: $P = (2, 5)$.

1. P lines up with 2 on the horizontal axis.
2. It lines up with 5 on the vertical axis.
3. Write the horizontal coordinate first: $(2, 5)$.

2. Plot A(6, 1) and B(1, 6). Explain why they are different points.

Worked solution 2: A is at (6, 1); B is at (1, 6).

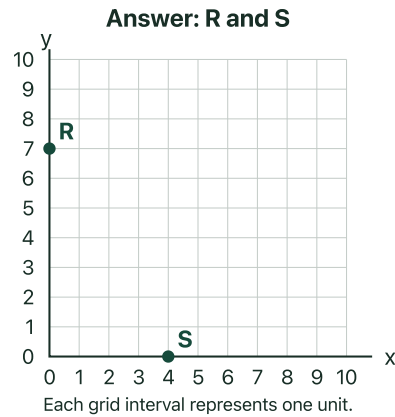
1. For A, move 6 right and 1 up.
2. For B, move 1 right and 6 up.
3. Reversing the coordinate order changes the horizontal and vertical positions.



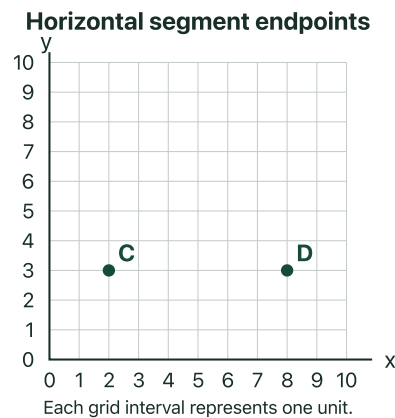
3. Plot $R(0, 7)$ and $S(4, 0)$. Name the axis containing each point.

Worked solution 3: R lies on the y-axis; S lies on the x-axis.

1. R has horizontal coordinate 0, so it stays on the vertical axis.
2. S has vertical coordinate 0, so it stays on the horizontal axis.
3. Zero is a coordinate, not an instruction to omit the point.



4. C is at $(2, 3)$ and D is at $(8, 3)$. Draw the horizontal segment CD and find its length in grid units.



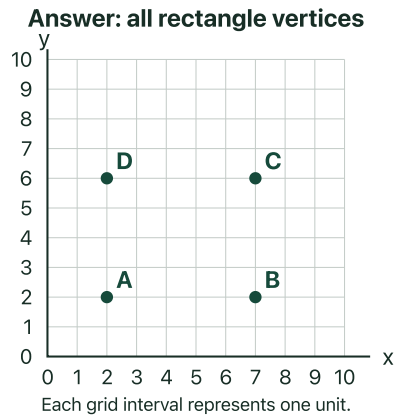
Worked solution 4: CD is 6 grid units long.

1. Both points have $y = 3$, so the segment is horizontal.
2. Subtract the x-coordinates: $8 - 2 = 6$.
3. Count the 6 unit intervals between C and D, not the number of grid lines touched.

5. A rectangle has consecutive vertices A(2, 2), B(7, 2), C(7, 6) and D. Find D and explain your reasoning.

Worked solution 5: D = (2, 6).

1. D must have the same x-coordinate as A for the left side to be vertical.
2. D must have the same y-coordinate as C for the top side to be horizontal.
3. Combine those coordinates: D(2, 6). Join the four vertices in order to check.



6. A robot starts at (1, 2), moves 5 units right, then 4 units up, then 2 units left. Plot its turning points and finish. What is the final point, and how many units did it travel?

Worked solution 6: The final point is (4, 6); the robot travelled 11 units.

1. After moving right: $(1 + 5, 2) = (6, 2)$.
2. After moving up: $(6, 2 + 4) = (6, 6)$.
3. After moving left: $(6 - 2, 6) = (4, 6)$.
4. Total path length is $5 + 4 + 2 = 11$ units. This is the route length, not the straight-line distance from start to finish.

