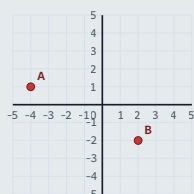


Plotting and reading points with negative co-ordinates

MODULE 8 · LOCATION, TRANSFORMATIONS AND SCALE REVIEW

Reading and plotting in all four quadrants follows the same rule — (x, y) : how far across (left if negative), then up or down.

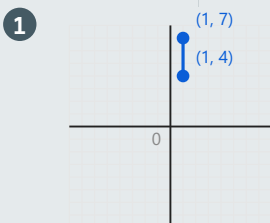


→ $(-4, -1)$: 4 left, 1 down.

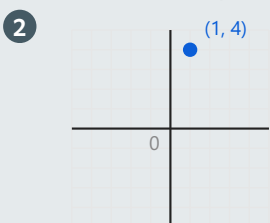
HOW TO ANSWER TODAY

- **Distance on an axis.** If the two points share x or y , subtract the OTHER coordinates. Answer is in units.
 $(2, 5)$ and $(2, 9)$ share $x=2 \rightarrow 9 - 5 = 4$ units
- **Quadrants.** Q1 is top-right; numbering goes ANTICLOCKWISE. A point on an axis is on the axis, not in a quadrant.
 $(3, 5) \rightarrow$ Q1 · $(-2, 1) \rightarrow$ Q2 · $(0, 4) \rightarrow$ on the y -axis
- **Scale drawing.** Scale 1:N means 1 unit on the drawing = N units in real life. Multiply the drawing length by N.
 Scale 1:100, drawing 5 cm \rightarrow real $5 \times 100 = 500$ cm = 5 m

WARM-UP



Eoin draws a plan of the school yard on grid paper. The flagpole is at $(1, 4)$ and the basketball hoop is at $(1, 7)$. How many grid squares apart are the flagpole and the basketball hoop on his plan?



Mr Ó Briain has set up a treasure hunt across the school yard using a coordinate grid chalked on the ground. The first clue Saoirse finds points to the spot at $(1, 4)$. Which quadrant of the grid contains the point $(1, 4)$?

- 3 Oisín draws a scale plan of his classroom for a maths project at a scale of **1:10**. The teacher's desk measures **12 cm** on his drawing. What is the real length of the desk in centimetres?

A scale drawing is drawn at 1:10. A line on the drawing measures 12 cm. What is the real length?

- 4 Oisín draws a plan of the classroom dice-rolling track at a scale of **1:10** for his maths copy. On the drawing, the track measures **9 cm**. What is the real length of the track in centimetres?

A scale drawing is drawn at 1:10. A line on the drawing measures 9 cm. What is the real length?