

The full four-quadrant co-ordinate plane

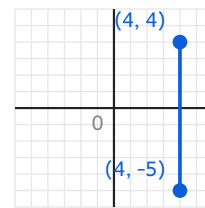
MODULE 8 · LOCATION, TRANSFORMATIONS AND SCALE SHAPE & SPACE

HOW TO ANSWER TODAY

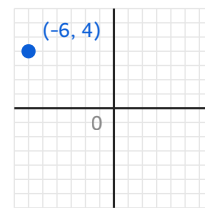
- **Distance on an axis.** If the two points share x or y, subtract the OTHER coordinates. Answer is in units.
(2, 5) and (2, 9) share $x=2 \rightarrow 9 - 5 = 4$ units
- **Quadrants.** Q1 is top-right; numbering goes ANTICLOCKWISE. A point on an axis is on the axis, not in a quadrant.
(3, 5) $\rightarrow$ Q1 · (-2, 1) $\rightarrow$ Q2 · (0, 4) $\rightarrow$ on the y-axis

★ STRETCH PROBLEMS

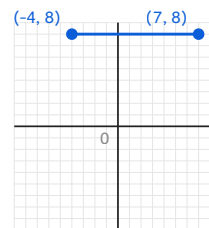
- 1 Cian sets up a cone game in the school yard using a grid chalked on the tarmac. He places one cone at (4, 4) and another at (4, -5). What is the distance between the two cones along the grid?



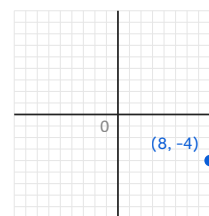
- 2 Mr Ó Briain draws a coordinate grid in chalk on the yard and the pupils place cones at different points. Cara puts her cone at (-6, 4). Which quadrant of the grid is her cone in?



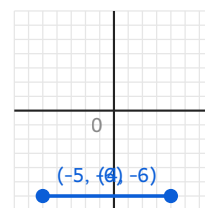
- 3 5th class are mapping the school garden on grid paper. The strawberry bed is at (-4, 8) and the rhubarb patch is at (7, 8) on their grid, where each unit stands for one metre. How many metres apart are the two beds along the row?



- 4 Aoife draws a coordinate grid of where each pupil sits in 5th class, with the teacher's desk at the origin. She marks her own desk at the point (8, -4). Which quadrant of the grid is Aoife's desk in?



- 5 Mr Ó Briain sketches a relay-race plan on a coordinate grid in the PE hall. Cian's starting cone is marked at (4, -6) and Saoirse's starting cone is at (-5, -6). What is the distance between the two cones on the grid?



SHAPE & SPACE