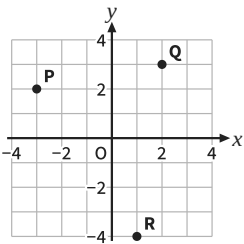


1 Coordinates

- a) Write down the coordinates of P, Q and R.



- b) Mo says (0, -3) is on the x axis. Is Mo right? Explain.

a) $P(-3, 2), Q(2, 3), R(1, -4)$
b) No: $x = 0$, so it is on the y axis

2 Coordinates

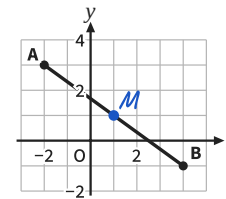
$A(-3, 2), B(3, 2)$ and $C(3, -2)$ are three corners of rectangle ABCD.

- a) Write down the coordinates of D.
b) The units on the axes are centimetres. Work out the area of the rectangle.

a) $D(-3, -2)$
b) $6 \times 4 = 24 \text{ cm}^2$

3 Midpoint of a line

- a) Find the midpoint of AB.
b) The midpoint of PQ is (2, 1). P is (-1, 3). Find Q.



a) (1, 1) b) +3 across, -2 up again
 $Q = (5, -1)$

4 Midpoint of a line

- a) Find the midpoint of (-5, 8) and (3, -2).
b) On a plan, a zip wire runs from a tower at (-6, 1) to a platform at (4, 8). A post stands halfway along it. Find the coordinates of the post.

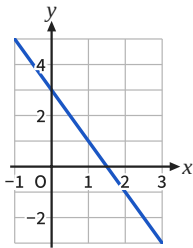
a) $\frac{-5+3}{2}, \frac{8+(-2)}{2} : (-1, 3)$
b) $\frac{-6+4}{2}, \frac{1+8}{2} : (-1, 4.5)$

5 Plotting straight lines

- a) Complete the table for $y = 3 - 2x$.

x	-1	0	1	2	3
y	5			-1	

- b) Draw the graph on the grid.



a) 5, 3, 1, -1, -3
b) a ruled line, (-1, 5) to (3, -3)

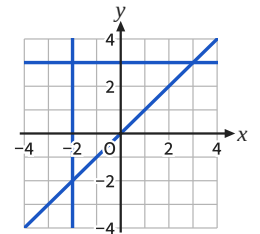
Graphs 1

revision mat answers

Foundation A

6 Plotting straight lines

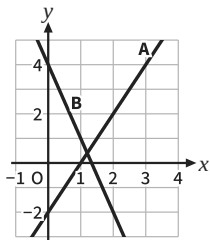
- a) Draw and label the lines $x = -2$ and $y = 3$.
b) Draw $y = x$. Where does it cross $y = 3$?



a) drawn on the grid
b) (3, 3)

7 Gradient of a line

- a) Work out the gradient of line A.
b) Which line is steeper, A or B? Show how you know.



a) up 4 for 2 across: 2 b) B: -3
 $3 > 2$, so B is steeper

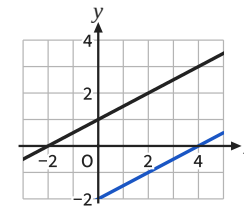
8 Gradient of a line

- a) Work out the gradient of the line through (-1, 5) and (3, -3).
b) A mountain railway climbs 150 m over a horizontal distance of 600 m. Work out its gradient.

a) $\frac{-8}{4} = -2$
b) $\frac{150}{600} = \frac{1}{4}$ or 0.25

9 Equation of a line

- a) Find the equation of the line.
b) Write the equation of a parallel line through (0, -2).



a) up 1 for 2 across, crosses at 1
 $y = \frac{1}{2}x + 1$ b) $y = \frac{1}{2}x - 2$

10 Equation of a line

- A straight line passes through (0, 5) and (2, -1).
a) Find the equation of the line.
b) Does the point (6, -12) lie on the line? Show how you know.

a) gradient $\frac{-6}{2} = -3$, crosses at 5
 $y = -3x + 5$
b) $-18 + 5 = -13$, not -12: no