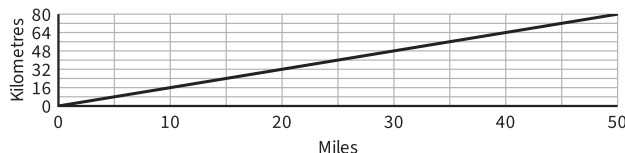


1 Conversion graphs

The graph converts between miles and kilometres.

- a) Change 30 miles into kilometres.
b) Change 200 km into miles.



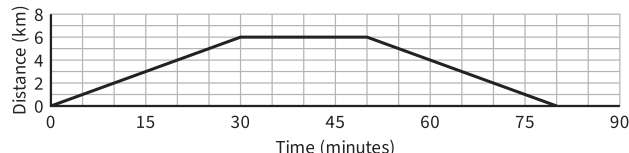
a) 48 km b) 80 km = 50 miles

$200 = 2.5 \times 80$, so $2.5 \times 50 = 125$ miles

2 Distance time graphs

Nia cycles from home to her gran's house and back.

- a) For how many minutes did Nia stop?
b) Work out her speed on the way home, in km/h.



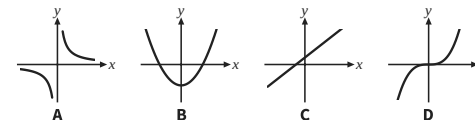
a) $50 - 30 = 20$ minutes

b) 6 km in 30 minutes: 12 km/h

3 Recognising graphs

- a) Match each equation to its graph: $y = 2x + 1$ $y = x^2 - 3$
 $y = x^3$ $y = \frac{1}{x}$

- b) Is the graph of $y = 6 - x^2$ linear or quadratic?
Describe its shape.



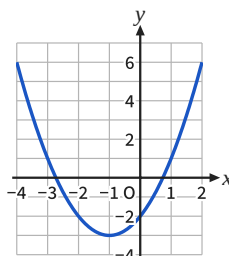
a) C, B, D, A b) quadratic, a $\cap$ shaped curve

4 Plotting quadratic graphs

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

x	-4	-3	-2	-1	0	1	2
y	6		-2			1	

- b) Draw the graph on the grid.
Join the points with a smooth curve.



a) 6, 1, -2, -3, -2, 1, 6

b) a smooth U curve, lowest at $(-1, -3)$

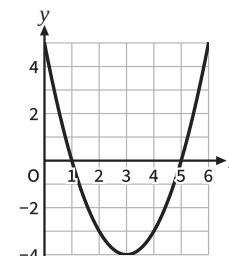
Graphs 2 revision mat answers

Foundation A

5 Roots and turning points

The graph of $y = x^2 - 6x + 5$ is drawn on the grid.

- a) Write down the roots of
 $x^2 - 6x + 5 = 0$.
b) Write down the coordinates of
the turning point.



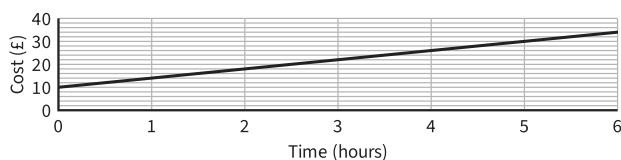
a) $x = 1$ and $x = 5$

b) halfway between: $(3, -4)$

6 Rates from graphs

The graph shows the cost of hiring an electric bike.

- a) Work out the rate, in pounds per hour.
b) Write a formula for the cost, £C, of hiring it for h hours.



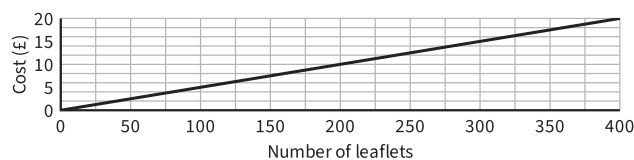
a) up £20 over 5 hours: £4 per hour

b) $C = 4h + 10$

7 Direct proportion graphs

The graph shows the cost of printing leaflets.

- a) How does the graph show direct proportion?
b) Work out the cost of printing 1000 leaflets.



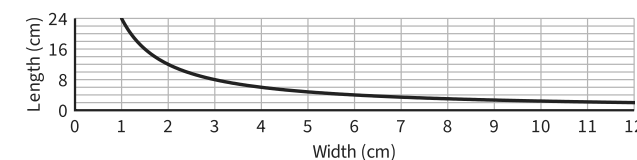
a) a straight line through $(0, 0)$

b) 400 cost £20, so 1000 cost £50

8 Inverse proportion graphs

Every rectangle on this graph has an area of 24 cm^2 .

- a) Use the graph to find the length when the width is 3 cm.
b) Find the length when the width is 16 cm.



a) 8 cm

b) $24 \div 16 = 1.5 \text{ cm}$