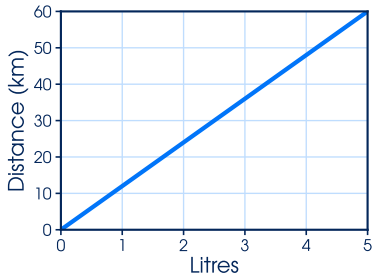
GCSE HIGHER · REVISION MAT 4

Gradients and proportion graphs

1 How many km per litre does the car do?

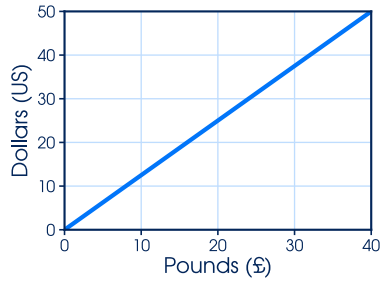


2 $y = \frac{18}{x}$

Find y when $x = 3$ and when $x = 6$.

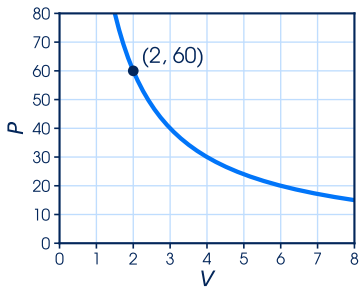
3 Explain why doubling x halves y when y is inversely proportional to x.

4 Find the exchange rate and convert £150.



5 Show that the line through (0, 0) and (5, 2) has equation $y = 0.4x$.

6 Pressure P is inversely proportional to volume V.



Find V when P = 40.

7 Explain why the graph of $y = \frac{k}{x}$ never touches the axes.

8 $y \propto x$ and $y = 18$ when $x = 4$.

Find where the line $y = kx$ meets $y = 2x + 15$.

ANSWERS · REVISION MAT 4

Gradients and proportion graphs

1 $\frac{60}{5}$

12 km per litre

2 **6 and 3**

3 ***xy* is constant, so if *x* doubles *y* must halve.**

4 Gradient 1.25

£1 = 1.25 dollars; £150 = 187.50 dollars

5 Gradient $\frac{2}{5} = 0.4$

y* = 0.4*x

6 PV = 120

V = 3

7 ***x* = 0 gives no value, and $\frac{k}{x}$ is never 0.**

8 $y = 4.5x$

$4.5x = 2x + 15 \Rightarrow x = 6$

(6, 27)

Mr&Mrs MATHS