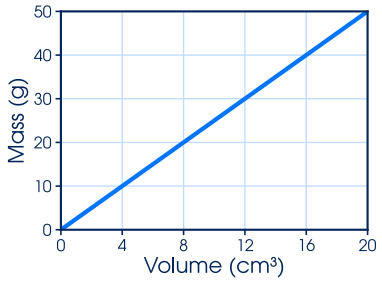
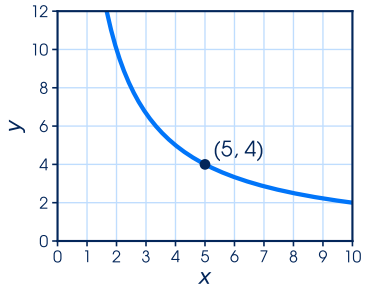
GCSE HIGHER · REVISION MAT 5

Gradients and proportion graphs

1 Find the density of the material.



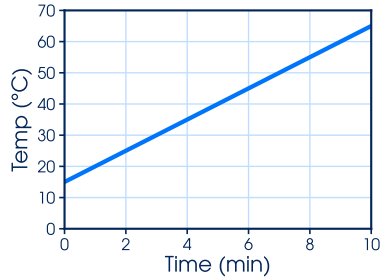
2 Find x when $y = 2$.



3 Explain why a graph showing $y \propto x$ must pass through the origin.

4 Find the rate of heating.

When does it reach 40 °C?



5 Show that (3, 8) and (6, 4) lie on $y = \frac{24}{x}$.

Describe the shape of its graph.

6 3.5 m of fabric costs £14.

Cost is proportional to length.

Find the gradient and the cost of 8 m.

7 Explain why xy is constant when y is inversely proportional to x.

8 A line through the origin meets $y = \frac{16}{x}$ at (2, 8).

Find its gradient and the other point where they meet.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 5

Gradients and proportion graphs

1 $\frac{50}{20}$

2.5 g/cm³

2 $xy = 20$

$x = 10$

3 **$y = kx$, so $x = 0$ gives $y = 0$.**

4 $\frac{50}{10} = 5$ °C per minute

After 5 minutes

5 $3 \times 8 = 24, 6 \times 4 = 24$

A curve that gets closer to the axes

6 **£4 per metre**

£32

7 **$y = \frac{k}{x}$, so $xy = k$.**

8 $m = 4$

$4x = \frac{16}{x} \Rightarrow x^2 = 4$

Gradient 4; (–2, –8)