GCSE HIGHER · REVISION MAT 1

Gradients and proportion graphs

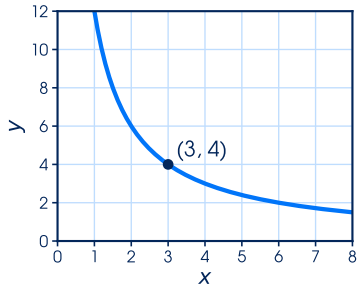
1 Find the gradient.

What does it represent?



2 This graph shows inverse proportion.

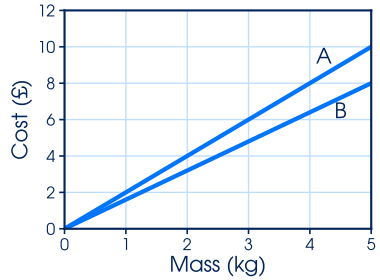
Find its equation.



3 Explain why the graph of $y = 3x$ shows direct proportion.

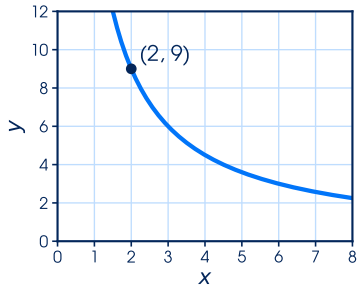
4 Rice A and Rice B are sold by mass.

Which is cheaper per kg?



5 Show that the line through (0, 0) and (8, 6) has equation $y = 0.75x$.

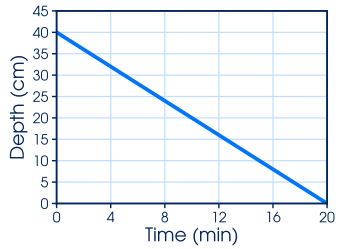
6 y is inversely proportional to x.



Find y when $x = 6$.

7 Explain why the graph of $y \propto x^2$ is not a straight line.

8 The graph shows the depth of water in a tank.



Find the rate of change and when the depth is 15 cm.

ANSWERS · REVISION MAT 1

Gradients and proportion graphs

1 $\frac{15}{10} = 1.5$

£1.50 per litre

2 $xy = 12$

$y = \frac{12}{x}$

3 **It is a straight line through the origin.**

4 A: £2 per kg, B: £1.60 per kg

Rice B

5 Gradient $\frac{6}{8} = 0.75$

Through origin, so $y = 0.75x$

6 $xy = 18$

$y = 3$

7 **Doubling x multiplies y by 4, not 2, so the gradient keeps changing.**

8 $\frac{-40}{20} = -2$ cm per minute

$40 - 2t = 15$

$t = 12.5$ minutes