GCSE HIGHER · REVISION MAT 4

Ratio, fractions and linear functions

1 Milk : flour = 2 : 3.

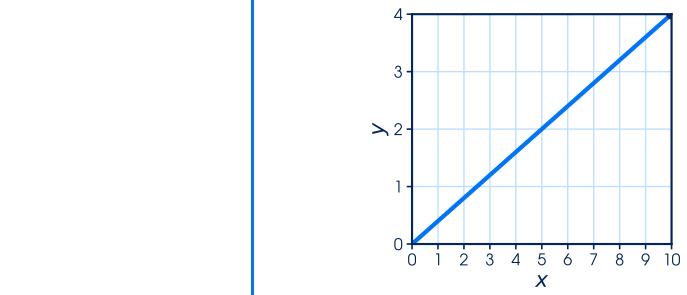
What fraction of the mixture is milk?

2 $m : n = 4 : 3$

Write n as a fraction of m.

3 Explain why this graph shows two quantities in a fixed ratio.

Write down $x : y$.



4 A map has scale 1 : 25 000.

Real distance = 25 000 × map distance.

Find the real distance for 7.2 cm.

5 $y = 1.6x$

Show that $x : y = 5 : 8$.

6 A car uses 9 litres of fuel for 120 km.

Fuel used is proportional to distance.

How far can it go on 30 litres?

7 Explain what the gradient of a line through (0, 0) tells you about the ratio of y to x.

8 The lines $y = 2x$ and $y = 3x$ are drawn.

At $x = 12$, find the ratio of their y-values and the gap between them.

ANSWERS · REVISION MAT 4

Ratio, fractions and linear functions

1 $\frac{2}{5}$

2 $n = \frac{3}{4}m$

3 It is a straight line through (0, 0).

$x : y = 5 : 2$

4 $7.2 \times 25\,000 = 180\,000$ cm

1.8 km

5 $\frac{y}{x} = 1.6 = \frac{8}{5}$

$x : y = 5 : 8$

6 $\frac{120}{9} = 13.3$ km per litre

400 km

7 **The gradient is $\frac{y}{x}$,**

so $x : y = 1 :$ gradient.

8 24 and 36

2 : 3; gap 12

Mr&Mrs MATHS