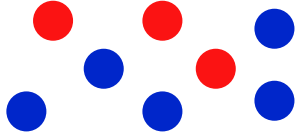


Writing ratio

Write the ratio of blue to red.



$$= 5 : 3$$

Simplifying ratio

1) Write in simplest terms:

a) $6 : 3 = 2 : 1$

b) $35 : 20 = 7 : 4$

2) Express in the form $1 : n$:

a) $4 : 5 = 1 : 1.25$

b) $\frac{3}{4} : \frac{1}{2} = 1 : \frac{2}{3}$

Sharing in a given ratio

a) Share £32 in the ratio 3 : 5

$$= £12 : £20$$

b) Share 49l in the ratio 6 : 1

$$= 42l : 7l$$

c) Find the largest portion when £2700 is shared in the ratio 2 : 3 : 4

$$= £1200$$

Compound measures

1) A cyclist travels 51km in three hours. What is the average speed of the cyclist? State the units in your answer.

$$= 17\text{km/h}$$

2) A different cyclist has an average speed of 20km/h. How long would it take them to travel 75km?

Give your answer as hours and minutes.

$$= 3 \text{ hours } 45 \text{ minutes}$$

Proportion

1) y is directly proportional to x .Given that $y = 20$ when $x = 8$, calculate the value of

a) y when $x = 6$ $y = 15$

b) x when $y = 85$ $x = 34$

2) y is inversely proportional to x .Given that $y = 9$ when $x = 2$, calculate the value of

a) y when $x = 3$ $y = 6$

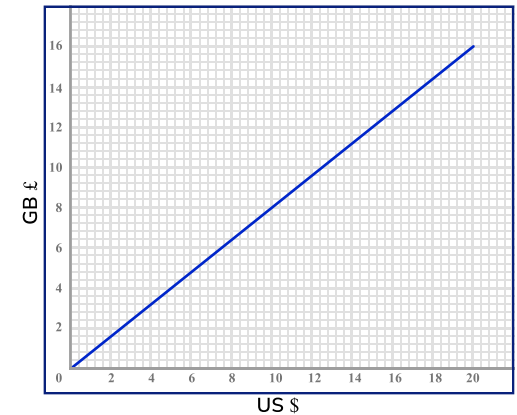
b) x when $y = 0.6$ $x = 30$

Conversions using graphs

The graph shows the relationship between US dollars and GB pounds. Use the graph to convert:

a) \$5 to GB pounds = £4

b) £240 to US dollars = \$300

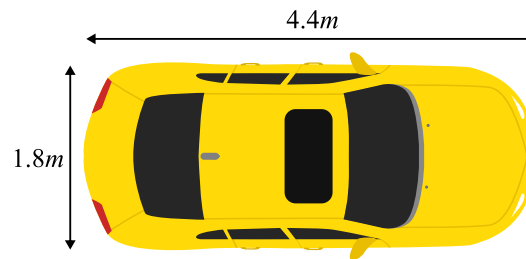


Using scale

1) A map has a scale of 1 : 25000. A distance on the map is measured as 14cm. How many kilometres would this distance be as a journey?

$$= 3.5\text{km}$$

2) The dimensions of a production road car are shown below:


 A toy version is made using the ratio 1 : 20.
Find the length and width of the toy car in centimetres.

$$\text{length} = 22\text{cm and width} = 9\text{cm}$$

Distance-time graphs

The distance-time graph shows a cyclist's journey.

 a) Between which points was the cyclist stationary?
= C and D

 b) What was the cyclist's average speed between point D and point E?
= 15km/h
