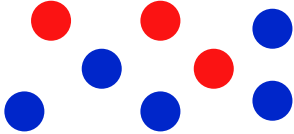


## Writing ratio

Write the ratio of blue to red.



## Compound measures

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

2) A different cyclist has an average speed of  $20\text{km/h}$ . How long would it take them to travel  $75\text{km}$ ? Give your answer as hours and minutes.

## Proportion

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

a)  $y$  when  $x = 6$

b)  $x$  when  $y = 85$

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

a)  $y$  when  $x = 3$

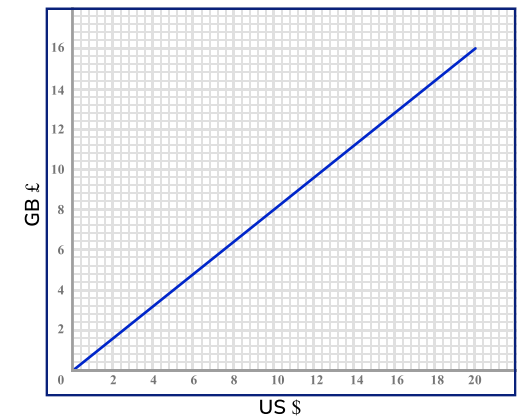
b)  $x$  when  $y = 0.6$

## Conversions using graphs

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

a) \$5 to GB pounds

b) £240 to US dollars



## Simplifying ratio

1) Write in simplest terms:

a)  $6 : 3$

b)  $35 : 20$

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

a)  $4 : 5$

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

## Sharing in a given ratio

a) Share £32 in the ratio  $3 : 5$

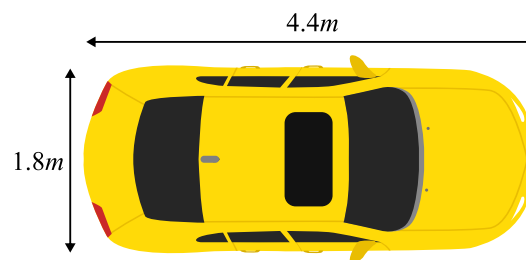
b) Share 49l in the ratio  $6 : 1$

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

## Using scale

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

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.

## Distance-time graphs

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

a) Between which points was the cyclist stationary?

b) What was the cyclist's average speed between point D and point E?

