

Direct Proportion Graphs

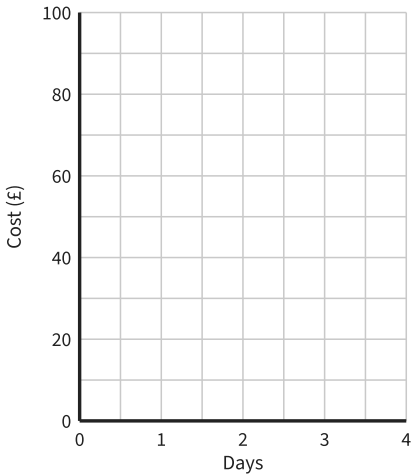


1 The cost of hiring a van is directly proportional to the number of days. **2 days costs £50.**

(a) Complete the table.

Days	1	2	3	4
Cost (£)		50		

(b) Plot the points and draw the graph.



(c) Use your graph to find the cost of hiring the van for 3.5 days.

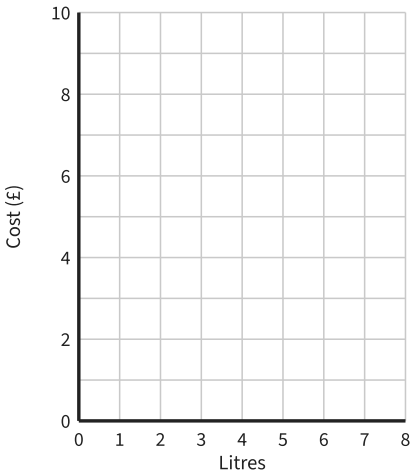
Answer _____

2 The cost of petrol is directly proportional to the number of litres. **4 litres costs £5.**

(a) Complete the table.

Litres	2	4	6	8
Cost (£)		5		

(b) Plot the points and draw the graph.



(c) Use your graph to find how many litres you get for £8.

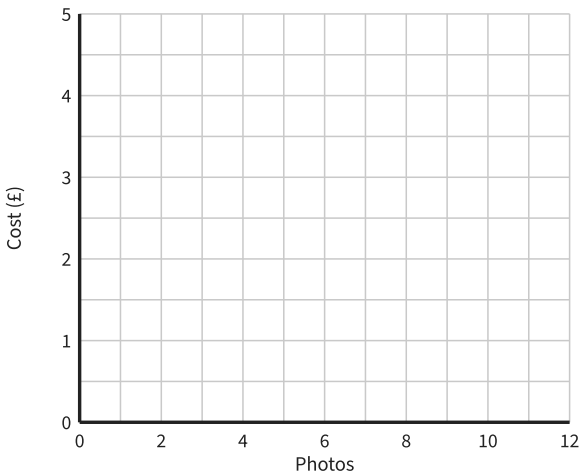
Answer _____

3 The cost of printing photos is directly proportional to the number of photos. **4 photos cost £1.40.**

(a) Complete the table.

Photos	4	6	10	12
Cost (£)	1.40			

(b) Plot the points and draw the graph.



(c) Use your graph to find the cost of 8 photos.

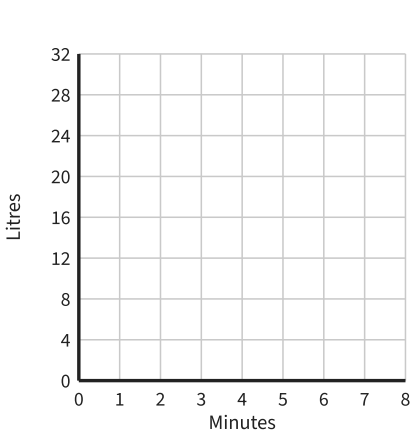
Answer _____

4 The amount of water in a tank is directly proportional to the time the tap has run. **After 3 minutes there are 12 litres.**

(a) Complete the table.

Minutes	1	3	5	7
Litres		12		

(b) Plot the points and draw the graph.



(c) Use your graph to find how long it takes to reach 24 litres.

Answer _____

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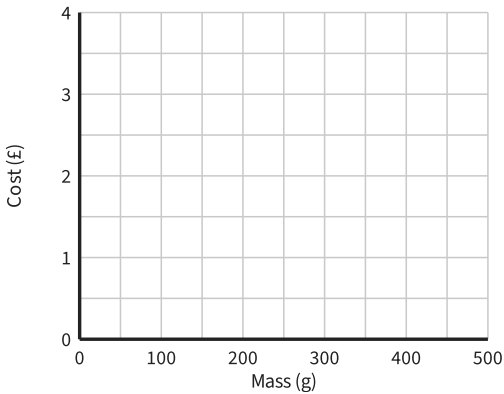
5

The cost of pick-and-mix is directly proportional to its mass. **250 g costs £2.**

(a) Complete the table.

Mass (g)	100	250	400	500
Cost (£)		2		

(b) Plot the points and draw the graph.



(c) Use your graph to find how much you get for £3.

Answer _____

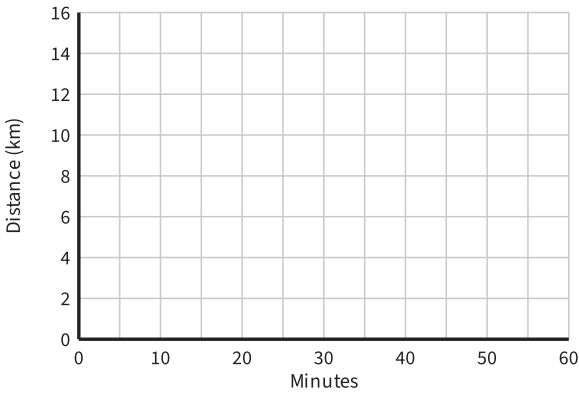
6

A cyclist rides at a steady speed. **In 20 minutes she travels 6 km.**

(a) Complete the table.

Minutes	10	20	40	50
Distance (km)		6		

(b) Plot the points and draw the graph.



(c) Use your graph to find how far she travels in 35 minutes.

Answer _____

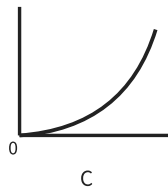
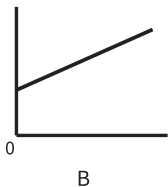
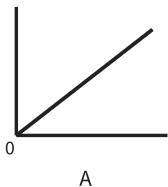
7

(a) Look at your six graphs. Write down **two** things they all have in common.

One _____

Two _____

(b) Circle the graph that shows direct proportion.



Direct Proportion Graphs *further practice*



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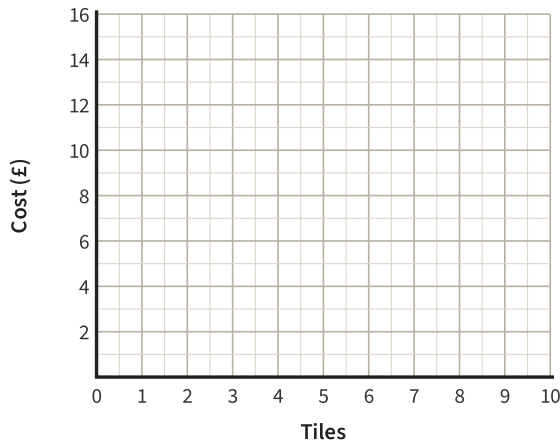


The cost of tiles is directly proportional to the number of tiles. 6 tiles cost £9.

(a) Complete the table.

Tiles	2	4	6	10
Cost (£)			9	

(b) Plot the points and draw the graph.



(c) Use your graph to find the cost of 7 tiles.

Answer _____

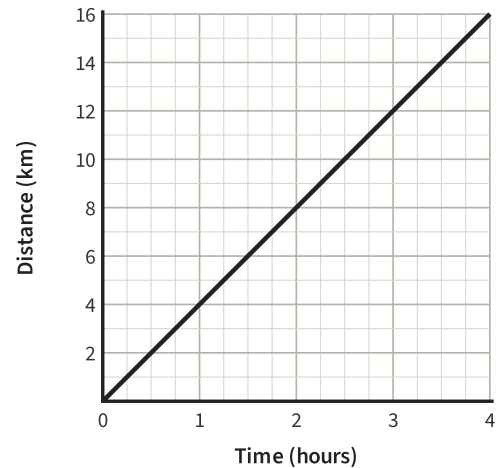
9



Nadia walks at a steady speed. The graph shows how far she walks.

(a) How far does she walk in $2\frac{1}{2}$ hours?

(b) How long does she take to walk 6 km?



(a) _____

(b) _____

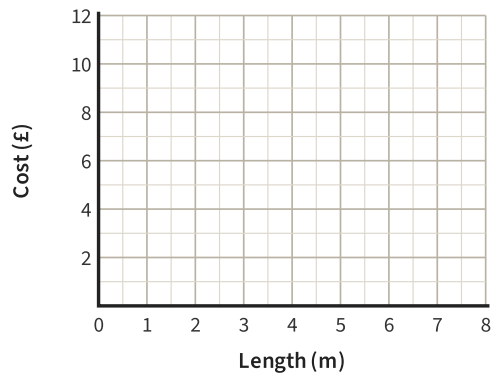
10



The cost of ribbon is directly proportional to its length. 4 m of ribbon costs £6.

(a) Draw the graph of cost against length.

(b) Use your graph to find the cost of 3 m.



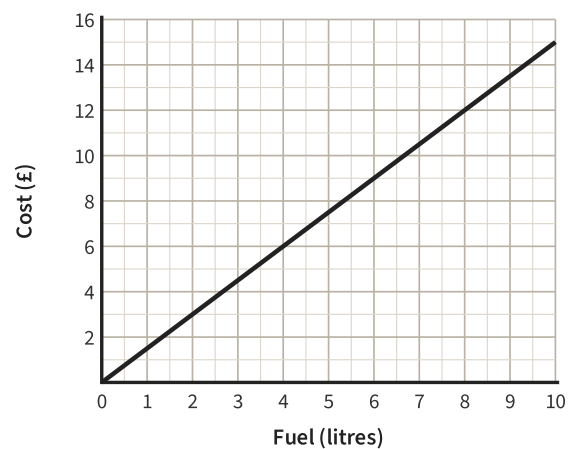
(b) _____

11



The graph shows the cost of fuel. It only goes up to 10 litres.

Use the graph to find the cost of 30 litres.



Answer _____

Direct Proportion Graphs *further practice*

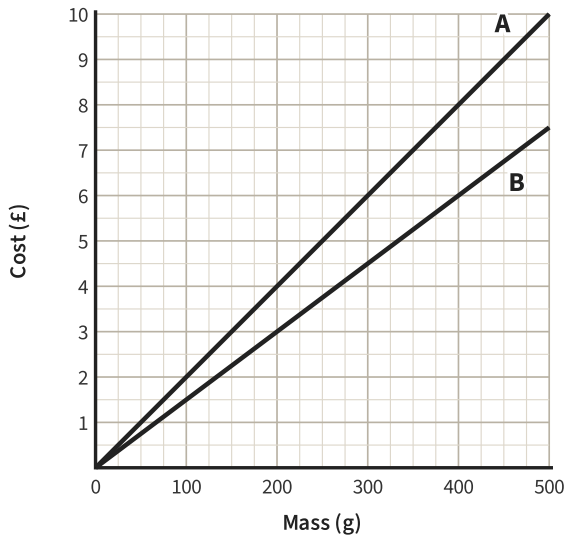


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The graph shows the cost of coffee beans at shop A and at shop B.

- (a) How much more does 400 g cost at shop A than at shop B?
(b) Which shop is better value? Explain.



- (a) _____

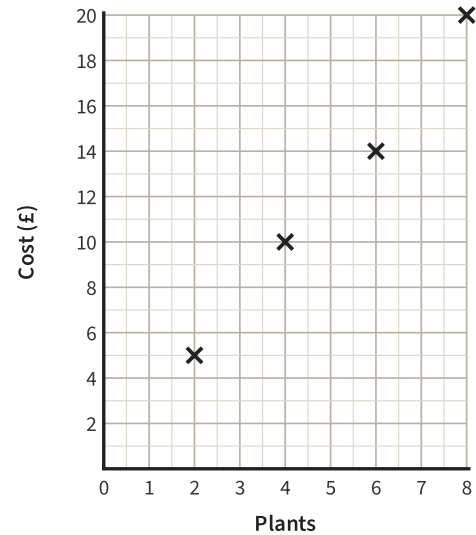
13



Priya's table shows the cost of plants. Cost is directly proportional to the number of plants.

Plants	2	4	6	8
Cost (£)	5	10	14	20

She plots her points. One value in her table is wrong. Which one? What should it be?



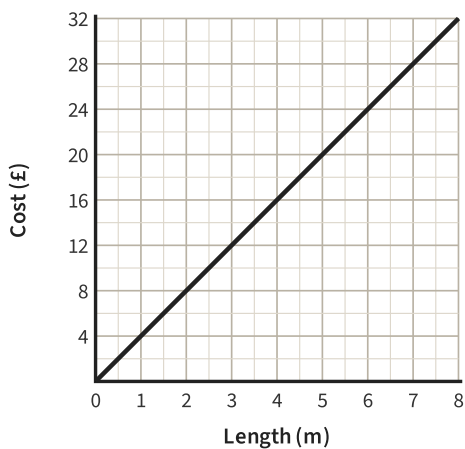
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14



The graph shows the cost of fabric. Kai has £20.

- (a) Can Kai buy 6 m of fabric? Use the graph to explain.
(b) What is the greatest whole number of metres he can buy?

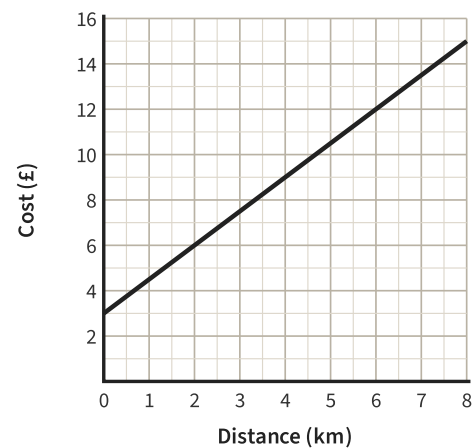


- (a) _____
(b) _____

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The graph shows the cost of a taxi ride. Ben says the cost is directly proportional to the distance, because the graph is a straight line. Is Ben right? Explain.



- _____
