Name:

Exam Style Questions

Linear Graphs: Real Life

Corbettmaths

Equipment needed: Ruler, pencil and pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

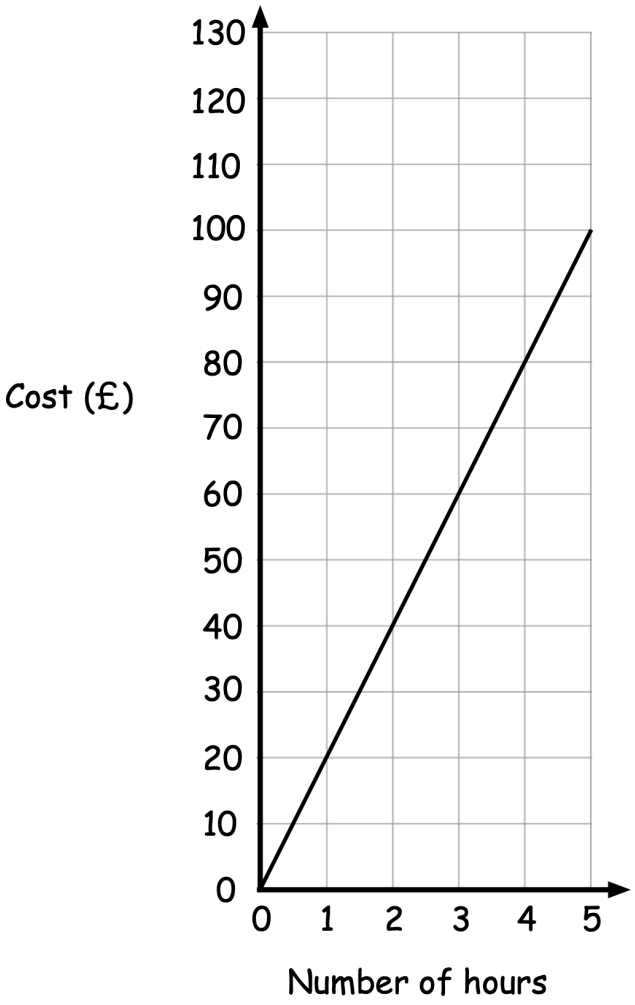
Video Tutorial

www.corbettmaths.com/contents

Video 198a

Answers and Video Solutions

1. The graph below shows the cost of hiring a village hall.



(a) How much does it cost to hire the village hall for 4 hours?

£.....

(1)

Jon hired the village hall and the cost was £60

(b) How long did Jon hire the village hall for?

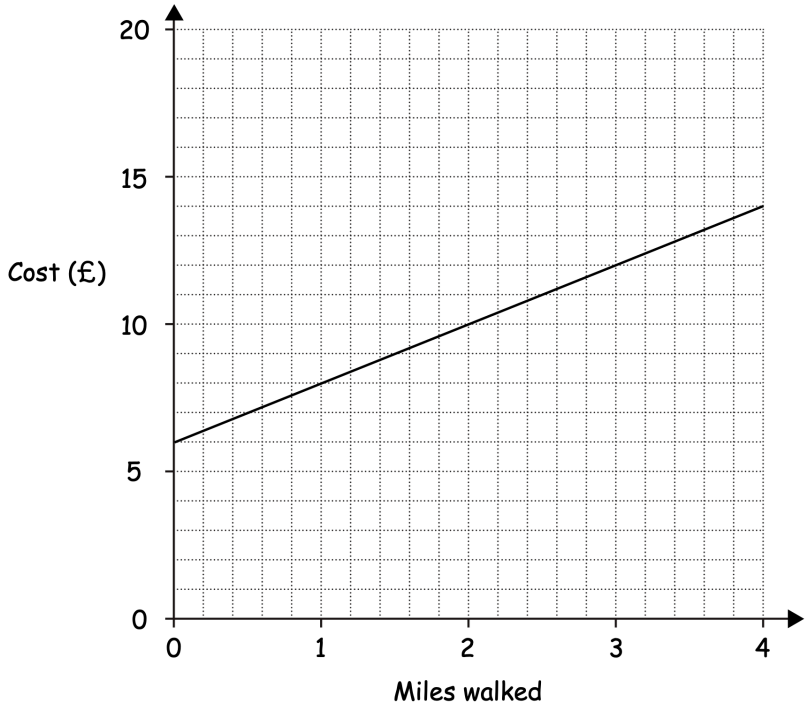
..... hours

(1)

2. Una is a dog walker.

The graph shows how much she charges for each walk.

For each walk, there is a set fee and a charge per mile.



(a) How much does Una charge for a 3 mile walk?

£.....

(1)

Una charges £9 for a walk.

(b) How long was the walk?

..... miles

(1)

(c) How much is the set fee for each walk?

£.....

(1)

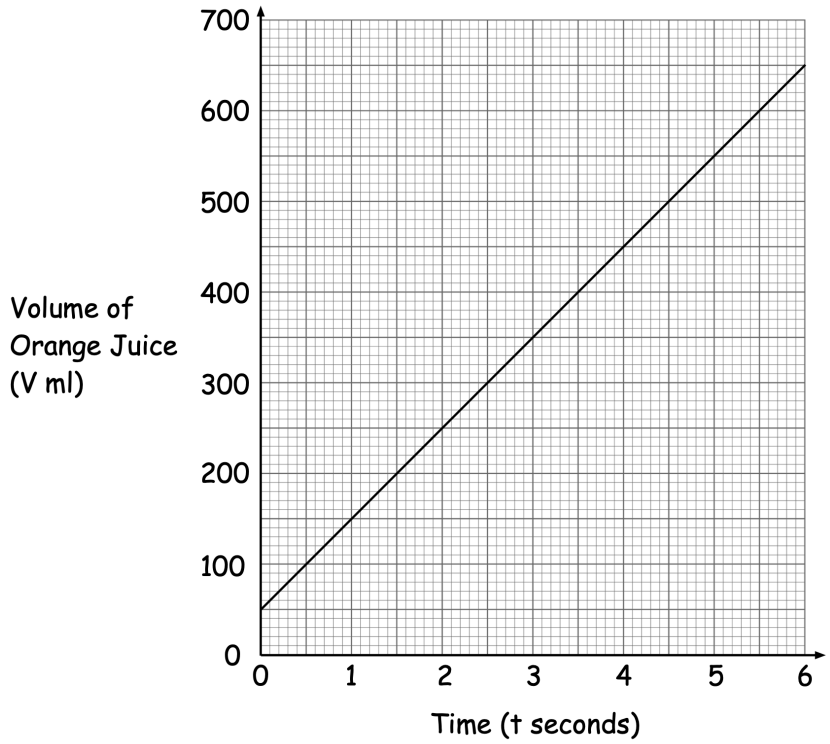
(d) How much does Una charge for each mile?

£.....

(2)

3. Conor has a measuring jug containing orange juice.
He then pours some more orange juice into the measuring jug.

The graph shows the volume of orange juice, V ml, in the measuring jug, t seconds after he starts pouring into it.



The line intersects the vertical axis at 50.

(a) What does this represent?

……

……

(1)

(b) Find the gradient of the line.

.....

(2)

(c) Explain what the gradient of the line represents.

……

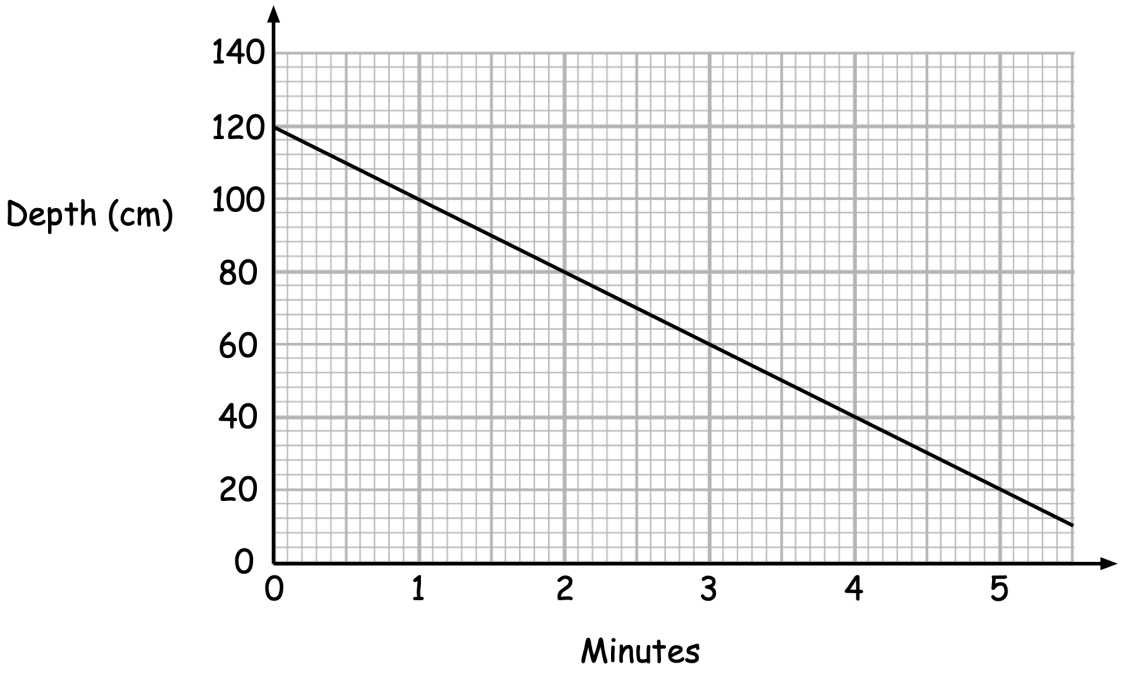
……

(1)

4. Abbie has a full paddling pool.

Abbie removes the plug at the base of the paddling pool and lets the water pour out for 5 and a half minutes.
Then she replaces the plug.

The graph shows the depth of water in the swimming pool (cm) over time (minutes).



(a) What was the depth of water when the paddling pool was full?

.....cm
(1)

(b) Work out the decrease in depth of the water per minute.

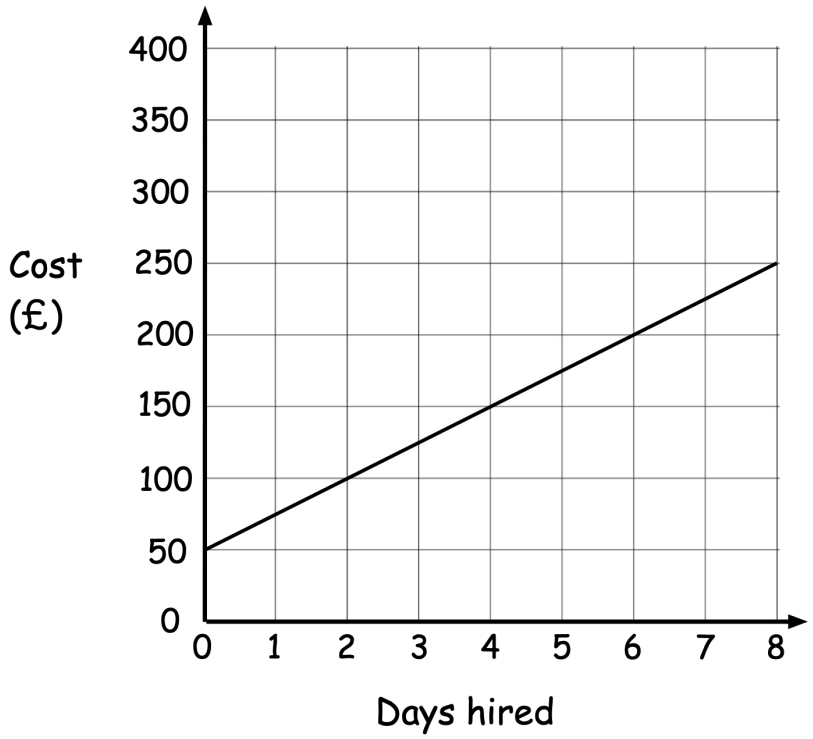
.....cm
(1)

(c) What was the depth of water when Abbie replaced the plug?

.....cm
(1)

5. The cost of hiring the digger is made up of delivery charge and a daily hire charge.
The collection of the digger is free.

The costs of hiring the digger up to 8 days is shown on the graph.



(a) Write down the delivery charge.

£.....

(1)

(b) Work out the daily hire charge

£.....

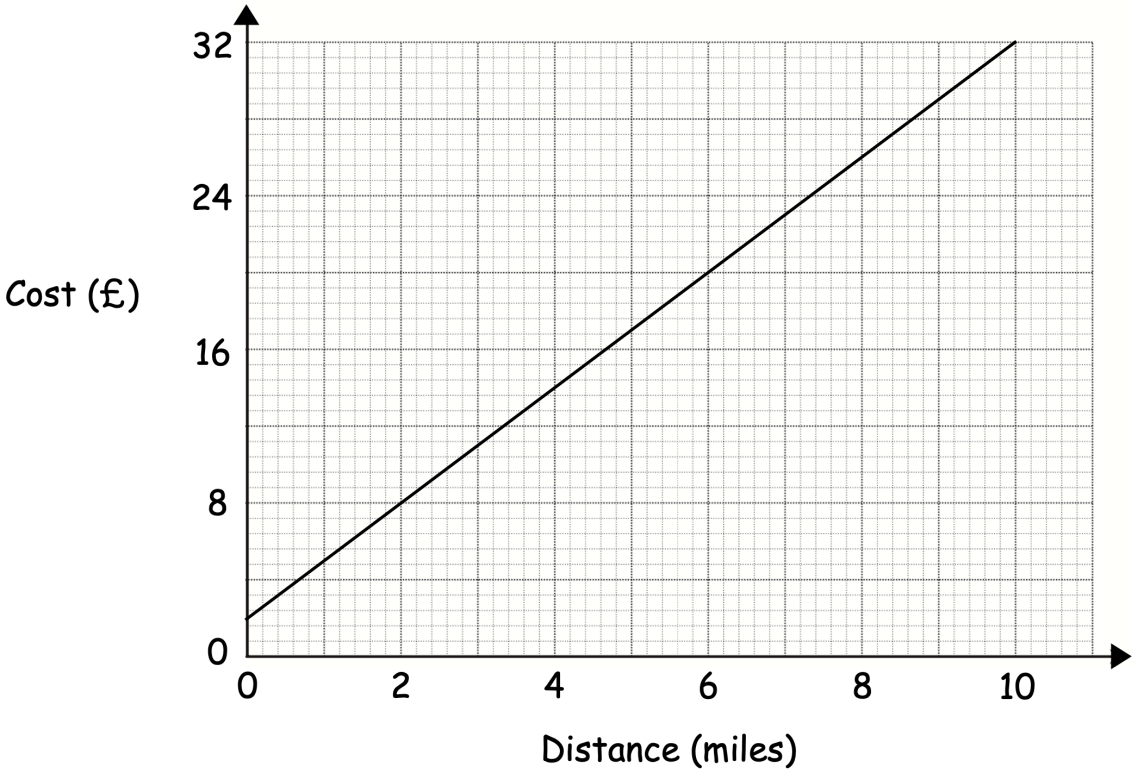
(2)

(c) Work out the cost of hiring the digger for 11 days.

£.....

(2)

6. The graph below shows how much a taxi driver charges for her journeys.



(a) Work out the gradient of the line.

.....

(2)

(b) Explain what your answer to (a) represents.

.....

.....

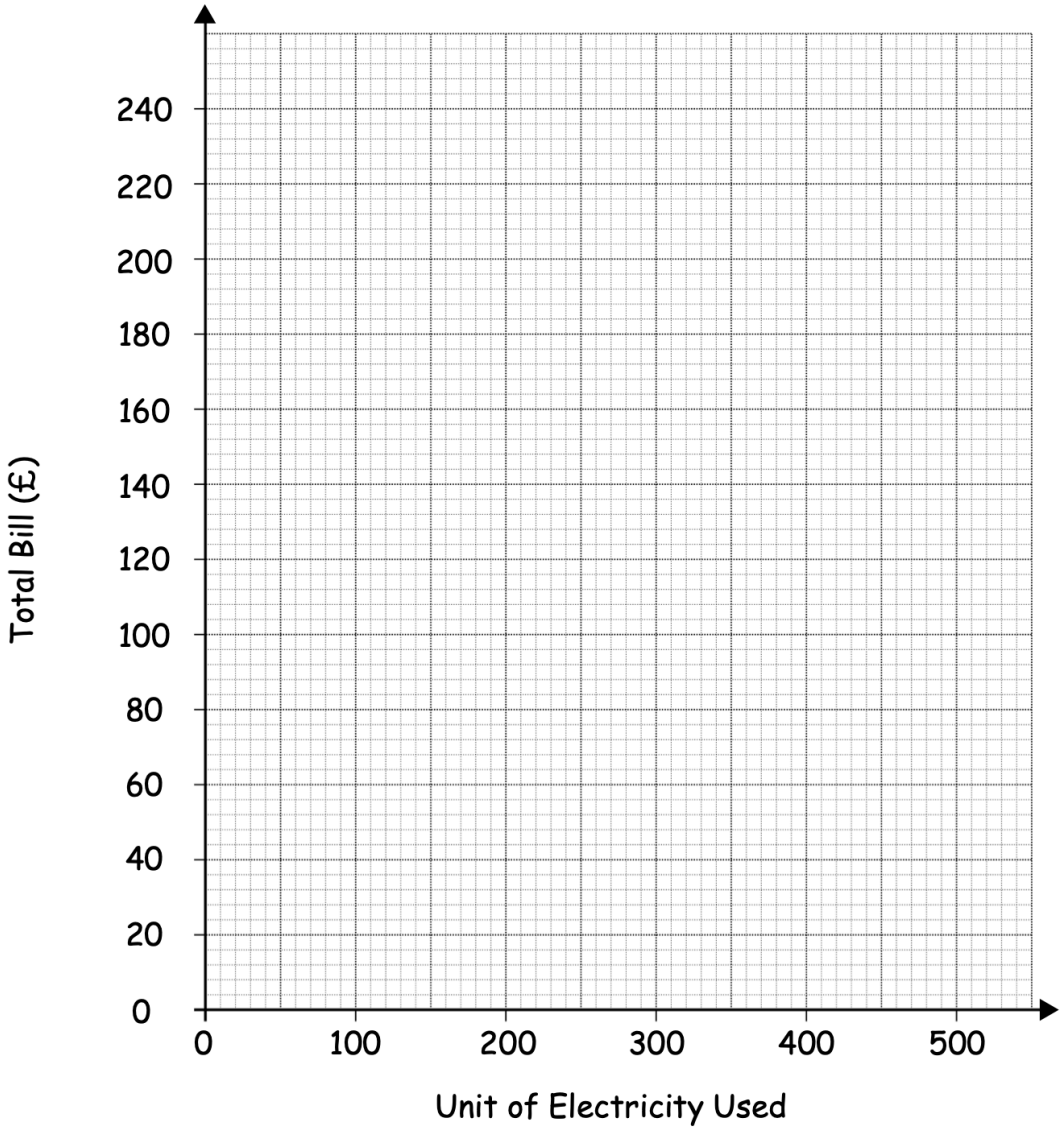
.....

(2)

7. The table shows the costs of 5 customers' electricity bills for one month.

Units of Electricity Used	100	120	200	290	380
Total Bill (£)	100	108	140	176	212

(a) Draw a straight line to show this information.



(2)

Each customer pays the same fixed monthly charge for their electricity and they also pay the same for each unit of electricity used.

(b) Find the fixed monthly charge.

.....

(1)

(c) Find the cost of one unit of electricity.

.....

(2)

In the same month, a customer used 800 units of electricity.

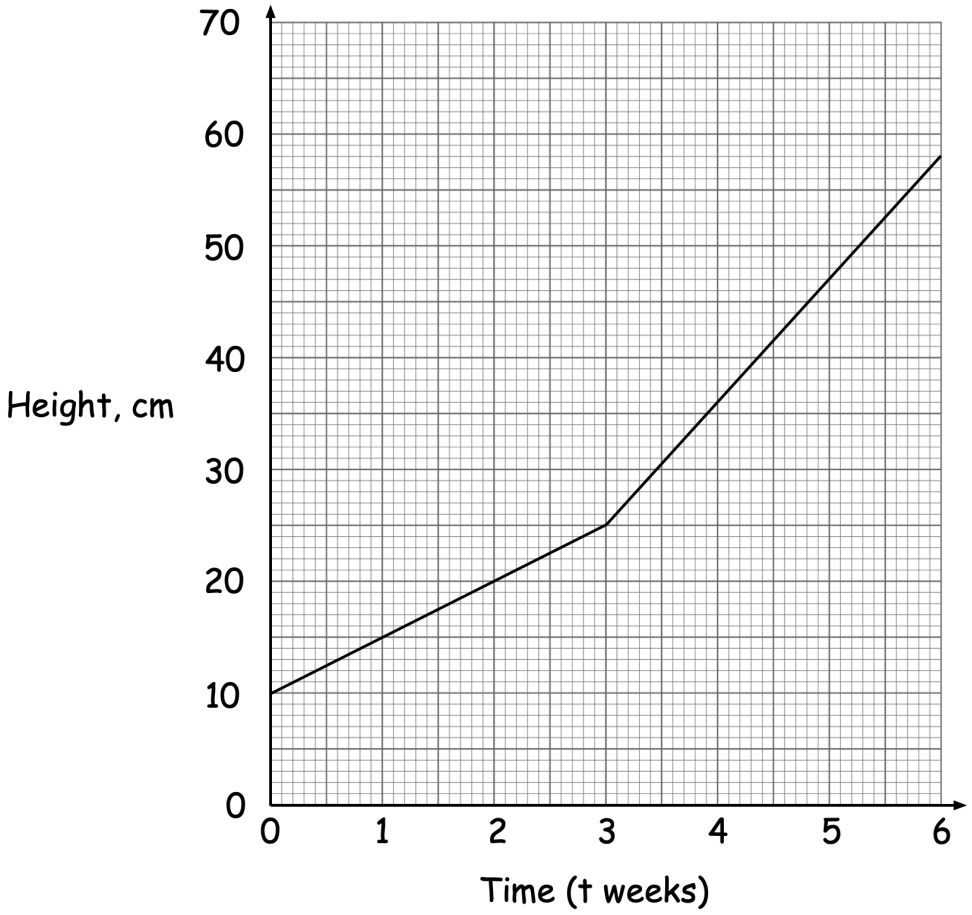
(d) Work out the total bill for this customer.

.....

(2)

8. Simon has a plant that should grow at the same rate every week.
After 3 weeks, Simon starts using plant food that increases the rate of growth.

The graph below shows the height of the plant over the first 6 weeks.



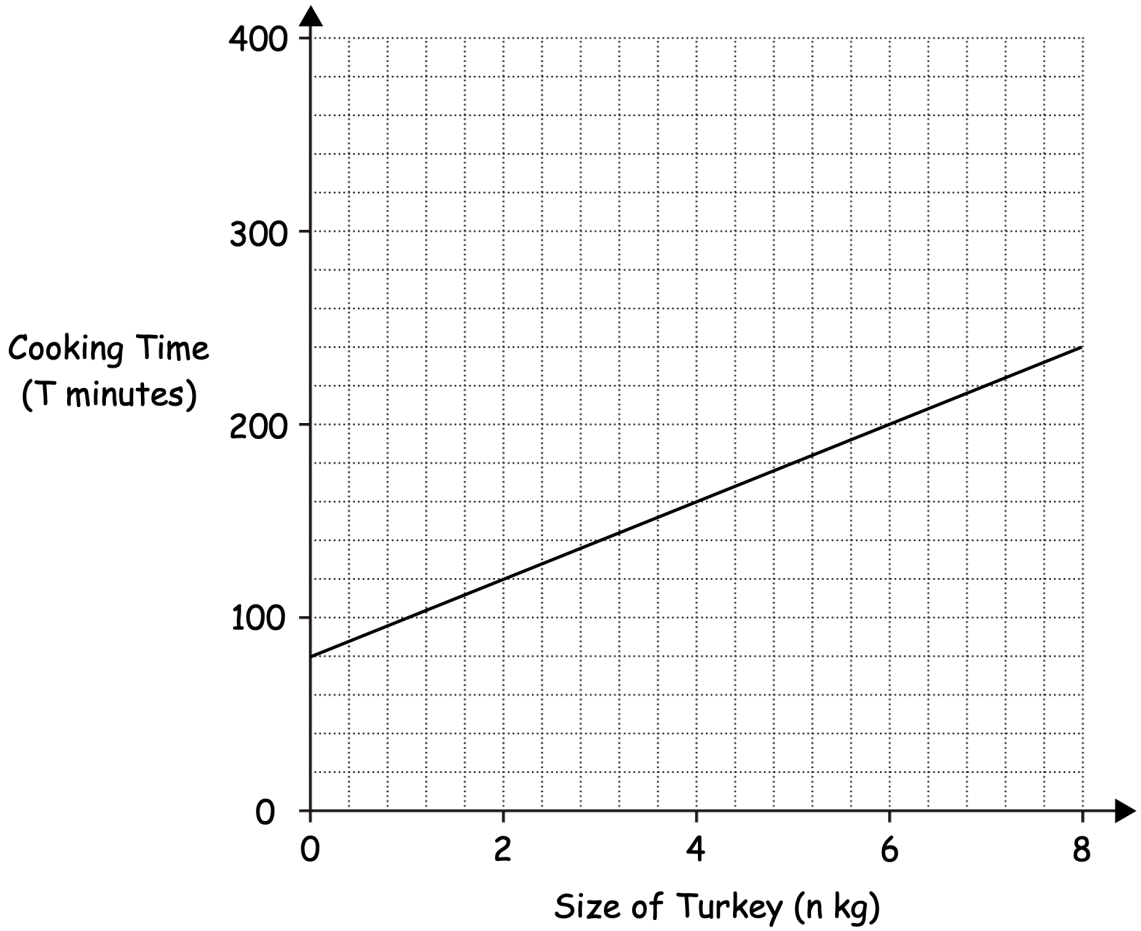
By how many more centimetres each week does the plant grow after giving it the plant food?

.....

(3)

9. Harry is cooking a turkey.

He finds this graph that shows information about the cooking time, T minutes, based on the size of the turkey, n kg.

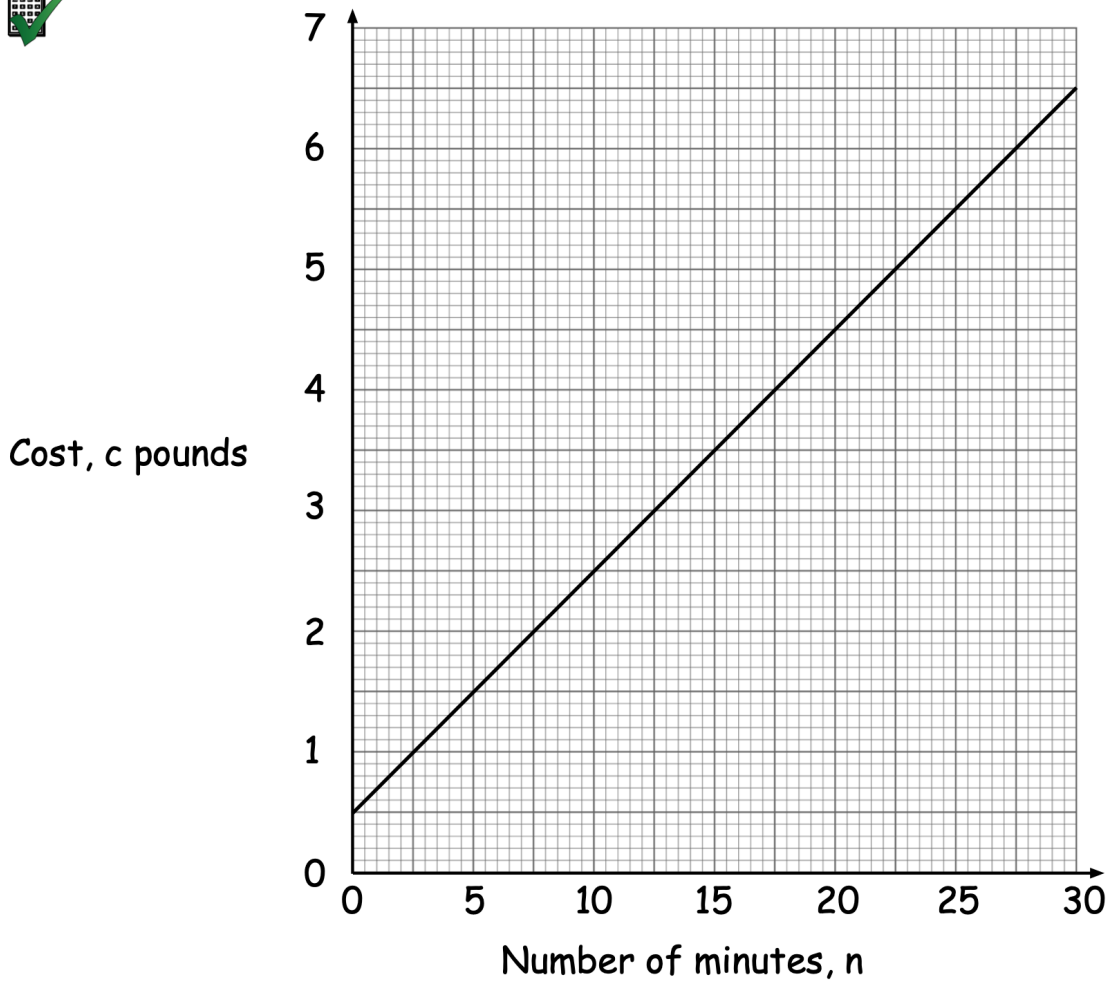


Write a formula for T in terms of n.

.....

(3)

10. The graph shows the cost of making an international telephone call.



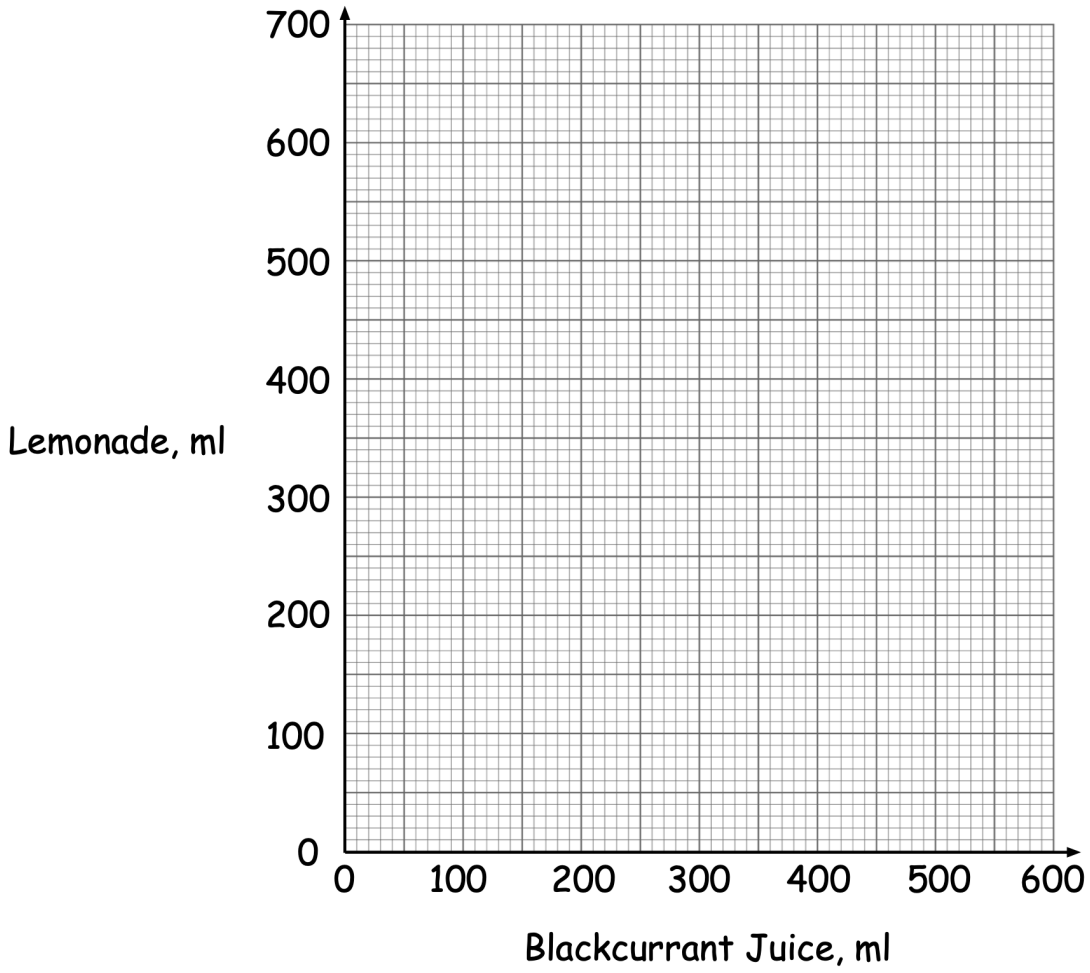
Write a formula for c in terms of n.

.....

(3)

11. Josh is making a drink by mixing blackcurrant juice and lemonade in the ratio 1:2

(a) Draw a straight line graph to show the amounts of blackcurrant juice and lemonade that should be mixed together.



(2)

(b) How much blackcurrant juice is needed to be mixed with 300ml of lemonade?

.....

(1)