

Real-Life and Conversion Graphs

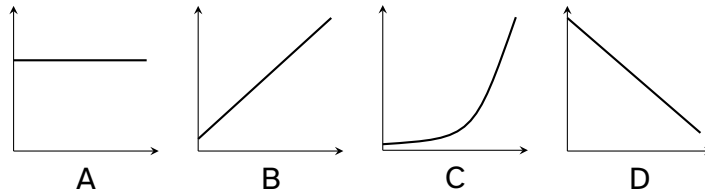
For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **21**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

1 Here are four graphs.



Circle the graph that shows a constant rate of increase.

[1 mark]

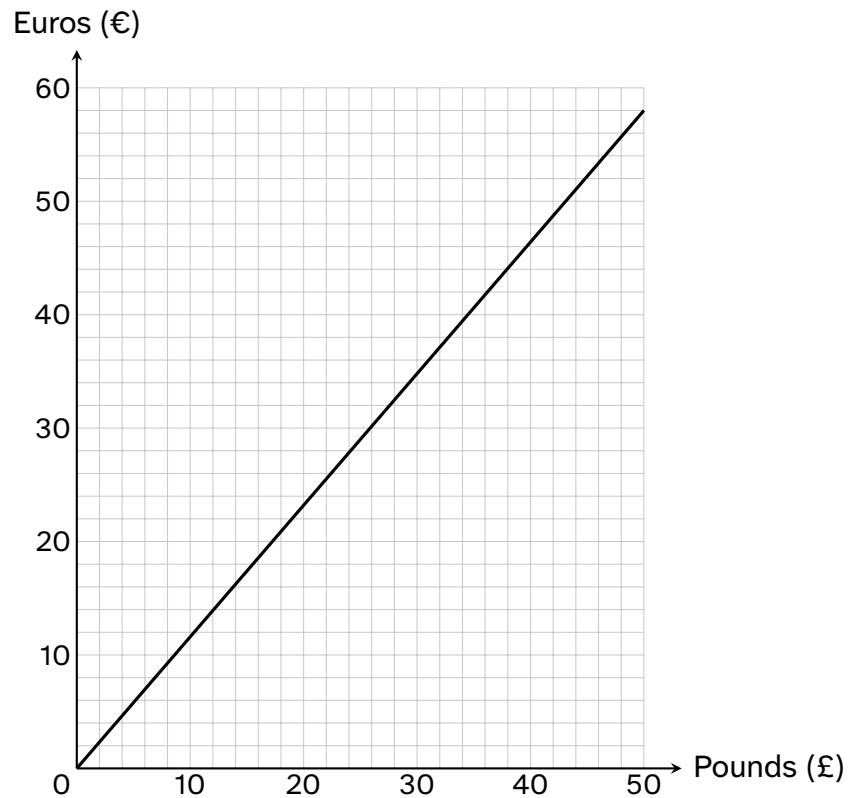
A

B

C

D

- 2 You can use this graph to convert between pounds (£) and euros (€).



- (a) Use the graph to convert £30 to euros.

[1 mark]

Answer € _____

- (b) Use the graph to convert €50 to pounds.

[1 mark]

Answer £ _____

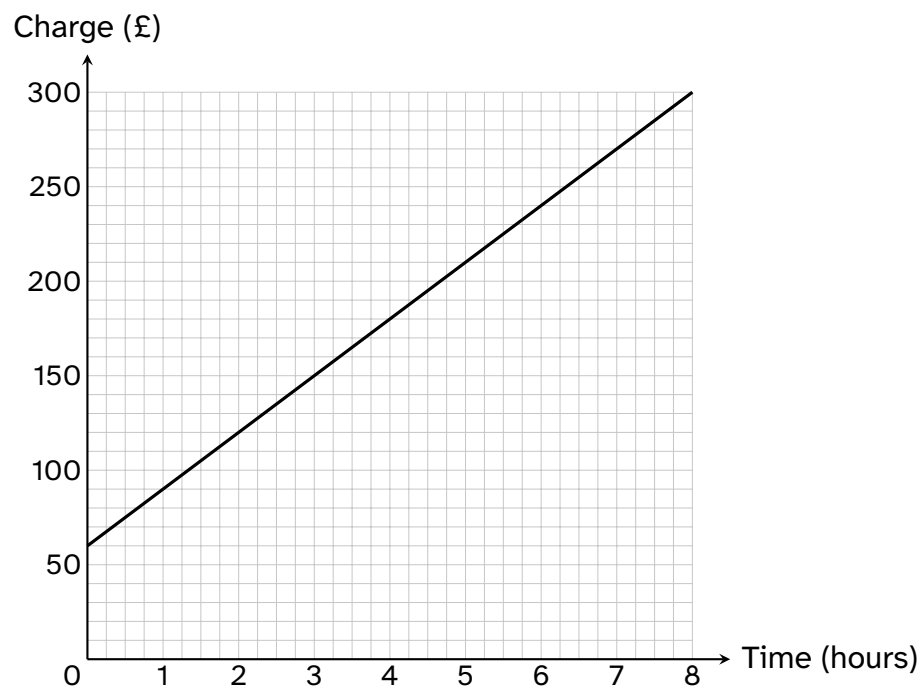
(c) Use the graph to convert £200 to euros.

[2 marks]

Answer € _____

- 3** Dev is a plumber. He charges a call-out fee and then an amount for each hour he works.

The graph shows his total charge for jobs of up to 8 hours.



- (a) Use the graph to find the charge for a job that takes 5 hours.

[1 mark]

Answer £ _____

- (b) Megan's bill was £150
How long did her job take?

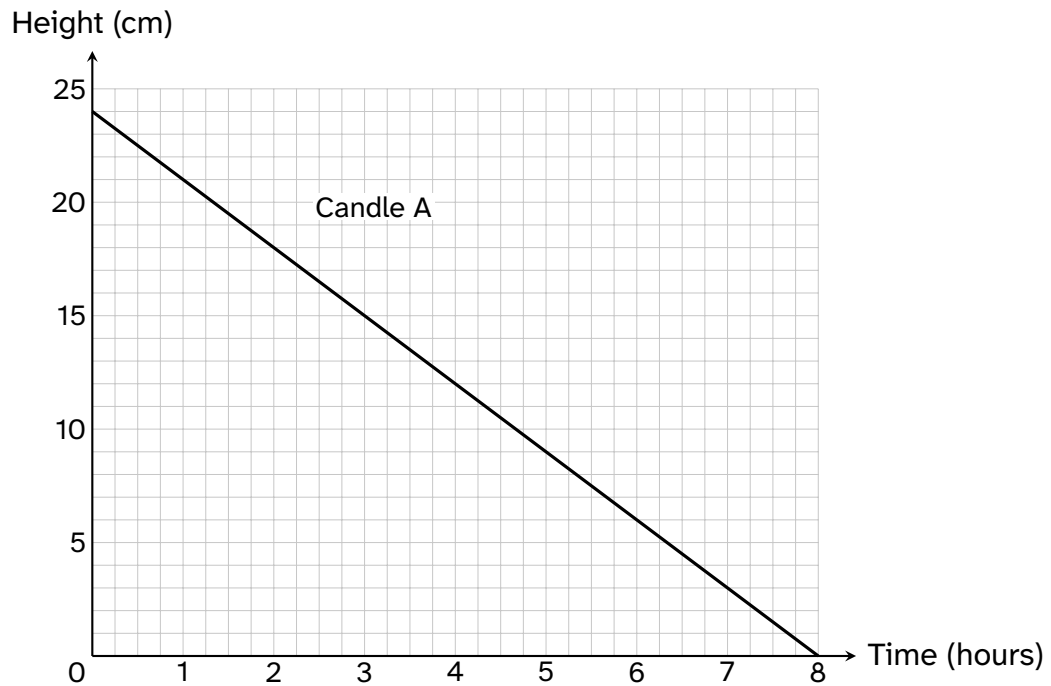
[1 mark]

Answer _____ hours

- (c) Rashid is a different plumber.
He charges £40 for each hour and has no call-out fee.
Megan says,
 "Rashid is always cheaper."
Is Megan correct?
You must show your working.

[2 marks]

- 4 Candle A is lit. The graph shows how its height changes.



- (a) Use the graph to find the height of candle A after 6 hours.

[1 mark]

Answer _____ cm

- (b) Candle B is 16 cm tall before it is lit.
It is lit at the same time as candle A.
Its height goes down by 1 cm every hour.
On the grid, draw a graph to show the height of candle B for the first 8 hours.

[2 marks]

- (c) Use your graphs to find the time when the two candles are the same height.

[1 mark]

Answer _____ hours

- 5 The graph shows the depth of water in a bath.



- (a) Describe what happens to the depth of water between 10 and 15 minutes.

[1 mark]

- (b) Work out the rate at which the bath fills in the first 10 minutes.
Give your answer in cm per minute.

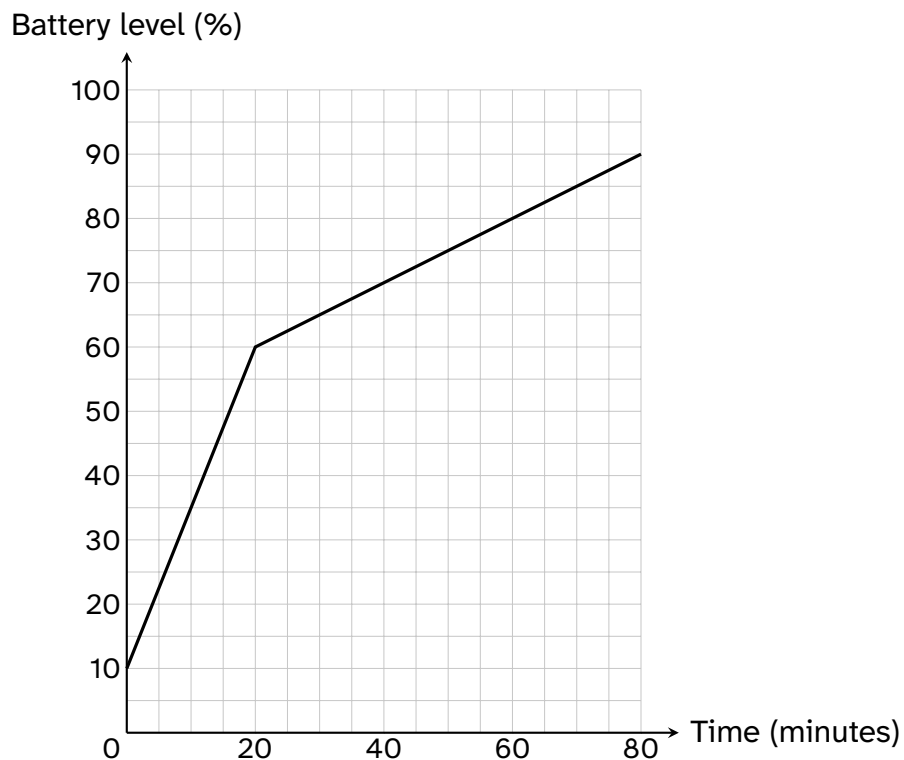
[2 marks]

Answer _____ cm/min

- (c) Is the bath emptying faster or slower than it filled?
Give a reason for your answer.

[1 mark]

- 6** Priya charges her phone.
For the first 20 minutes the phone uses fast charging.
After that it uses slow charging.
The graph shows the battery level of her phone.



- (a) How many times faster is the fast charging than the slow charging?

[3 marks]

Answer _____

- (b) How long does it take for the battery level to go from 35% to 70%?

[1 mark]

Answer _____ minutes