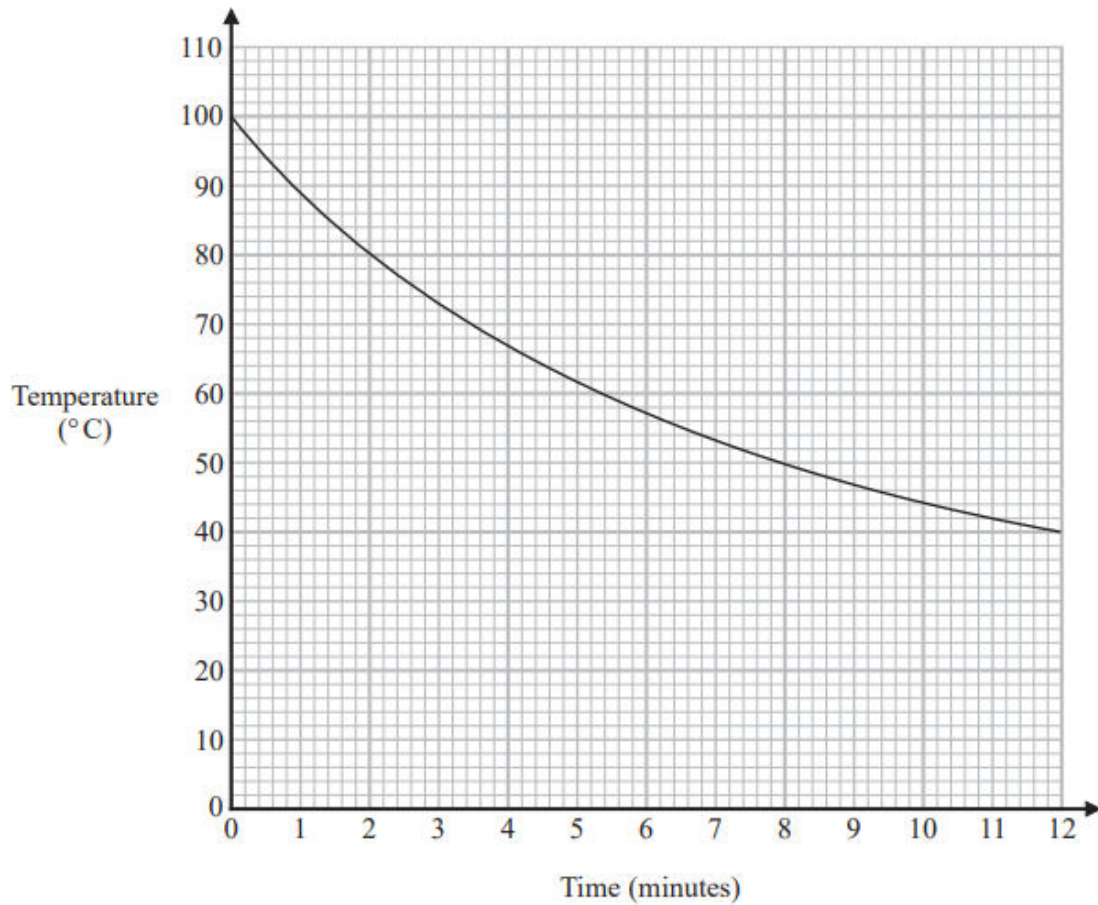


**REAL LIFE AND DISTANCE TIME GRAPHS**

Pearson Edexcel - Monday 8 June 2020 - Paper 3 (Calculator) Foundation Tier

1.

**10** The graph shows information about the time, in minutes, a liquid has been cooling and the temperature of the liquid in  $^{\circ}\text{C}$ .



(a) What is the temperature of the liquid at time 2 minutes?

.....  $^{\circ}\text{C}$   
(1)

Pam recorded the time when the liquid had a temperature of  $50^{\circ}\text{C}$ .

(b) Write down this time.

..... minutes  
(1)

Pam says that the temperature of the liquid drops more in the first 3 minutes of cooling than it does between time 9 minutes and time 12 minutes.

- (c) Is Pam correct?  
Give a reason for your answer.

.....

.....

.....

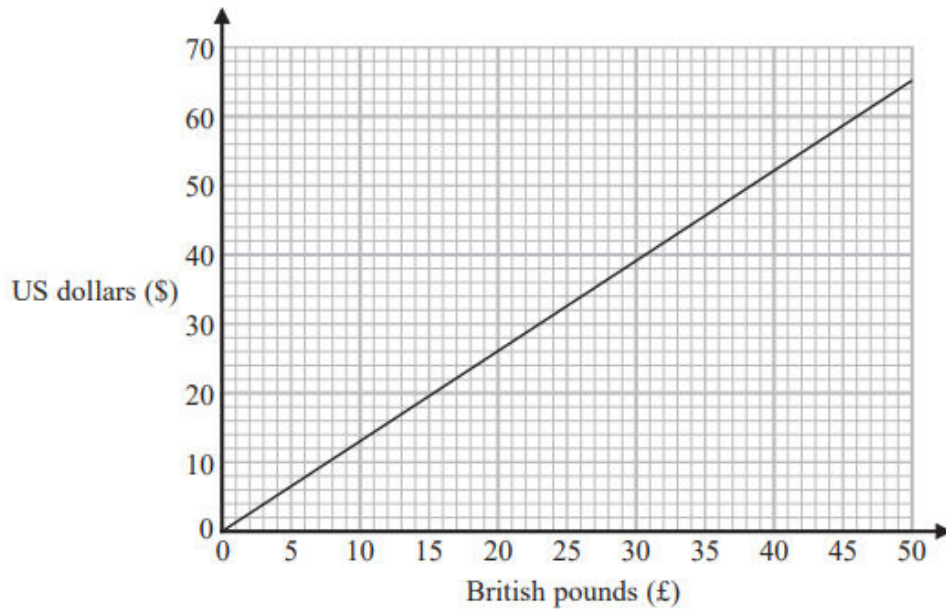
(1)

**(Total for Question 10 is 3 marks)**

---

2.

18 This graph can be used to change between US dollars (\$) and British pounds (£).



Rosie bought a ring in the USA.  
She paid 345 US dollars.

Work out in pounds the amount Rosie paid for the ring.

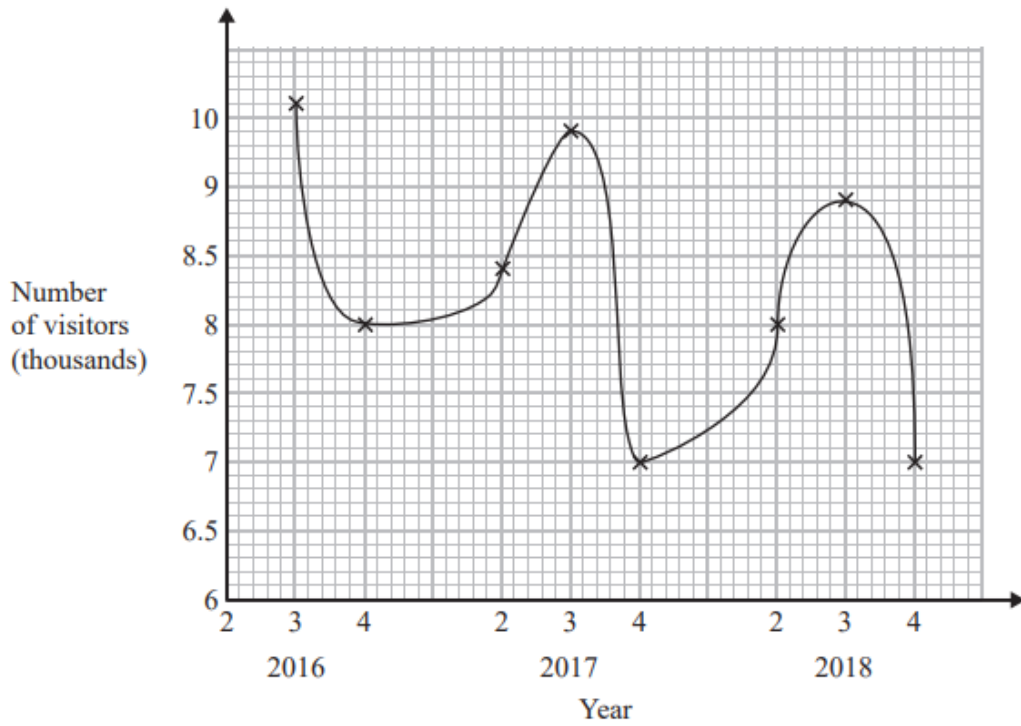
£ .....

**(Total for Question 18 is 3 marks)**

---

3.

27 Sean has drawn a time series graph to show the numbers, in thousands, of visitors to a fun park.



Write down two things that are wrong or could be misleading with this graph.

1 .....

.....

.....

2 .....

.....

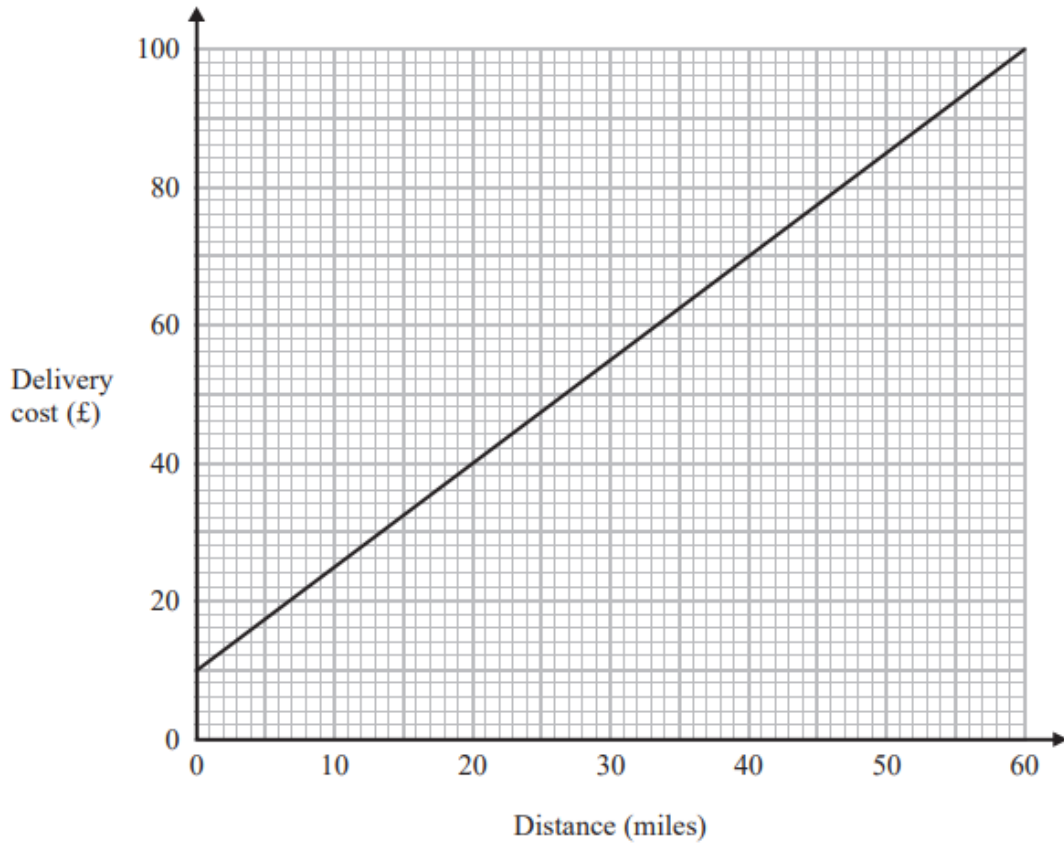
.....

**(Total for Question 27 is 2 marks)**

4.

12 Tom uses his lorry to deliver bricks.

You can use this graph to find the delivery cost for different distances.



For each delivery, there is a fixed charge plus a charge for the distance.

(a) How much is the fixed charge?

£ .....  
(1)

Tom makes two deliveries of bricks.  
The distance of one delivery is 20 miles more than the distance of the other delivery.

(b) Work out the difference between the two delivery costs.

£ .....

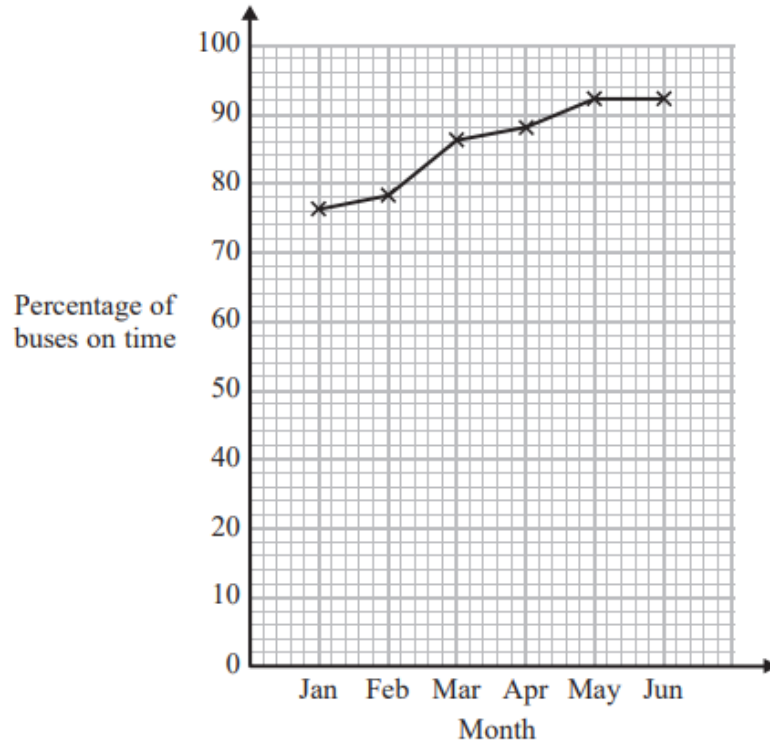
(2)

(Total for Question 12 is 3 marks)

Pearson Edexcel - Monday 6 November 2017 - Paper 2 (Calculator) Foundation Tier

5.

8 Chrissy drew this graph to show the percentage of buses that got to a bus stop on time for six months.



(a) Write down **one** thing that is wrong with the graph.

.....

..... (1)

(b) Describe the trend in the percentage of buses that got to the bus stop on time.

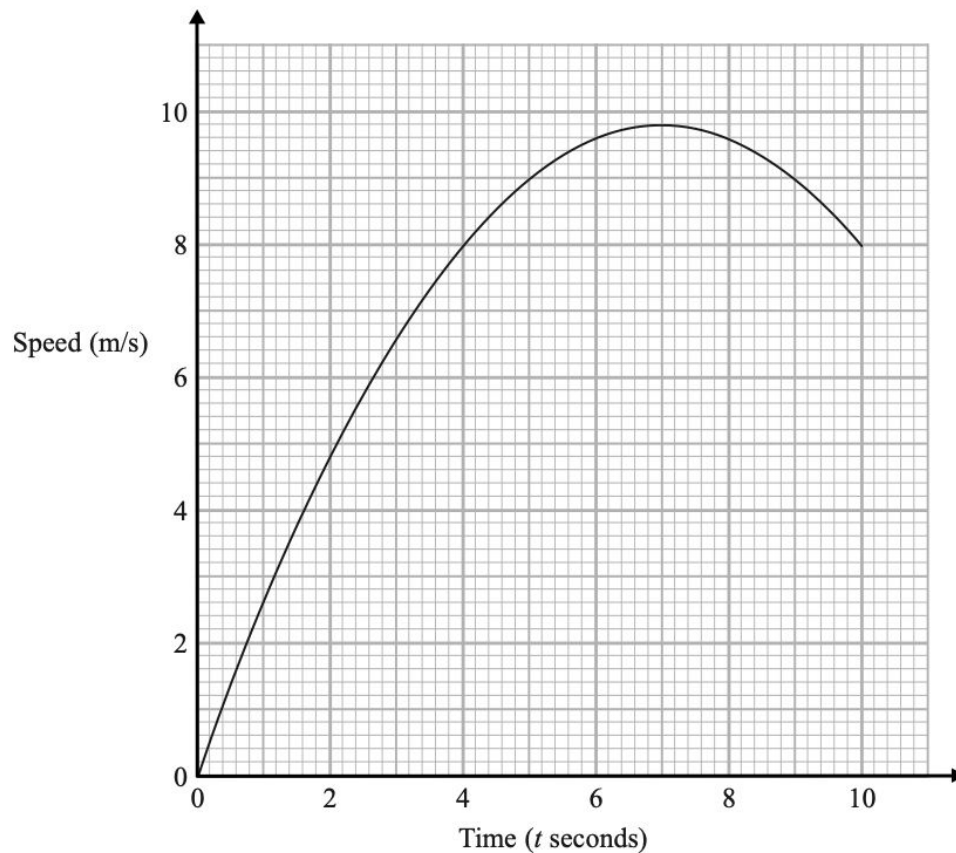
..... (1)

**(Total for Question 8 is 2 marks)**

---

10 Karol ran in a race.

The graph shows her speed, in metres per second,  $t$  seconds after the start of the race.



(a) Write down Karol's speed 3 seconds after the start of the race.

.....m/s  
(1)

(b) Write down Karol's greatest speed.

.....m/s  
(1)

There were two times when Karol's speed was 9 m/s.

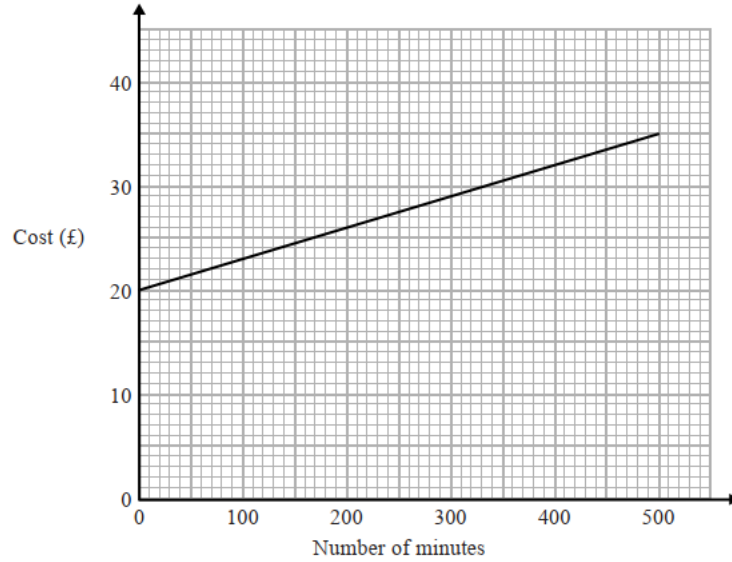
(c) Write down these two times.

.....seconds  
.....seconds  
(1)

(Total for Question 10 is 3 marks)

7.

- 14 The graph shows the cost of using a mobile phone for one month for different numbers of minutes of calls made.



The cost includes a fixed rental charge of £20 and a charge for each minute of calls made.

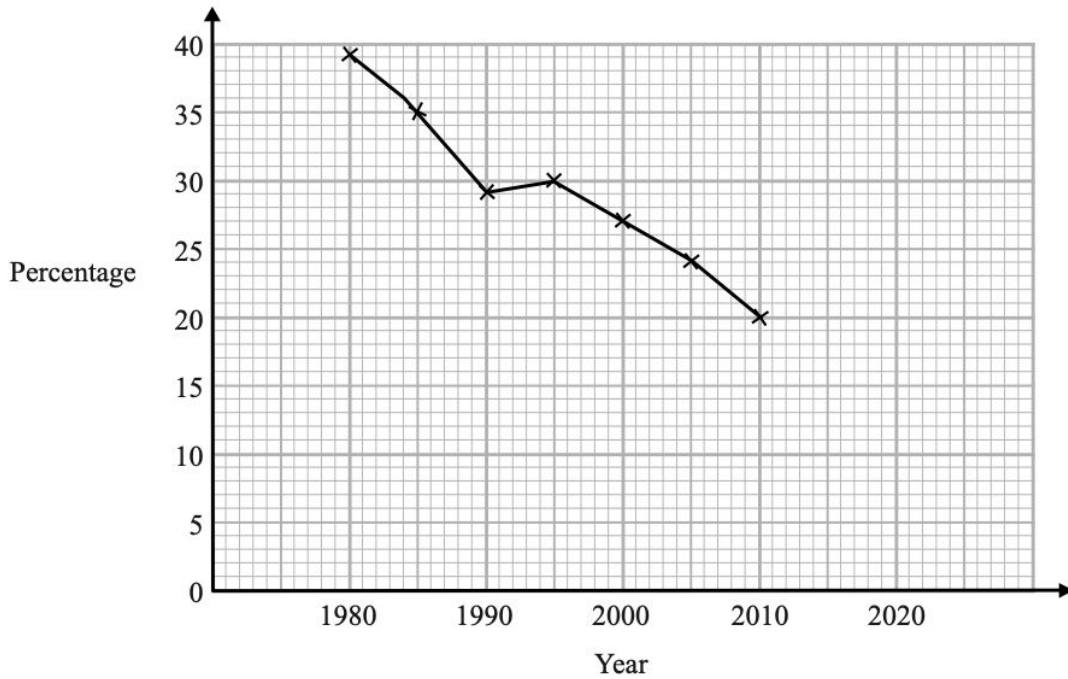
Work out the charge for each minute of calls made.

.....  
(Total for Question 14 is 2 marks)

8.



23 The time series graph shows information about the percentages of the people in a village that used the village shop for the years between 1980 and 2010



(a) Describe the trend in the percentage of the people in the village who used the shop for this period.

(1)

(b) (i) Use the graph to predict the percentage of the people in the village likely to use the shop in the year 2020

.....%

(ii) Is your prediction reliable?  
Explain your answer.

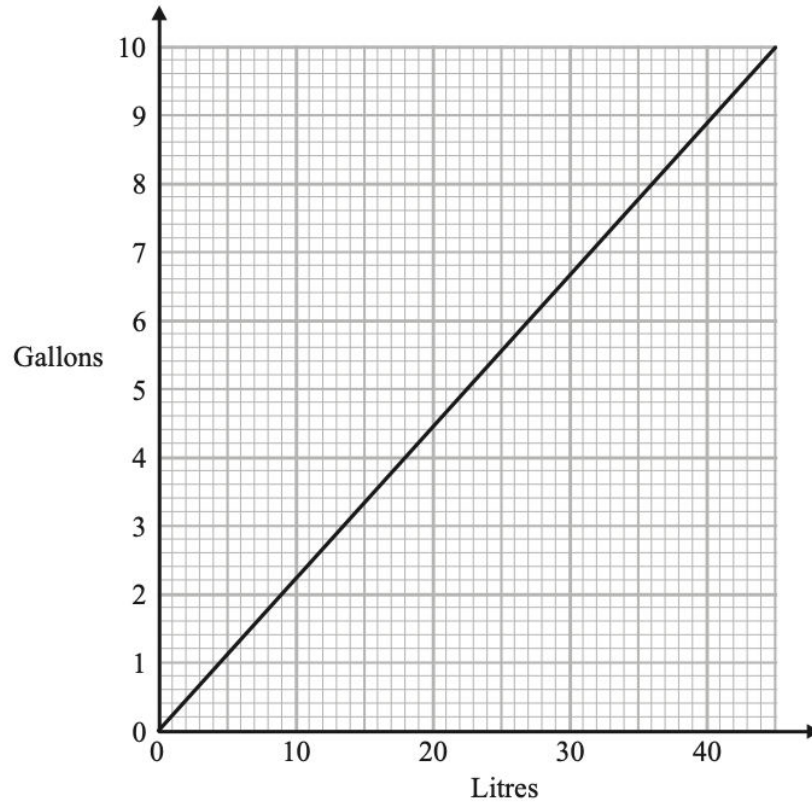
(3)

**(Total for Question 23 is 4 marks)**

Pearson Edexcel – Specimen 2 - Paper 3 (Calculator) Foundation Tier

9.

11 You can use this graph to change between litres and gallons.



Which is the greater, 60 litres or 12 gallons?  
You must show how you get your answer.

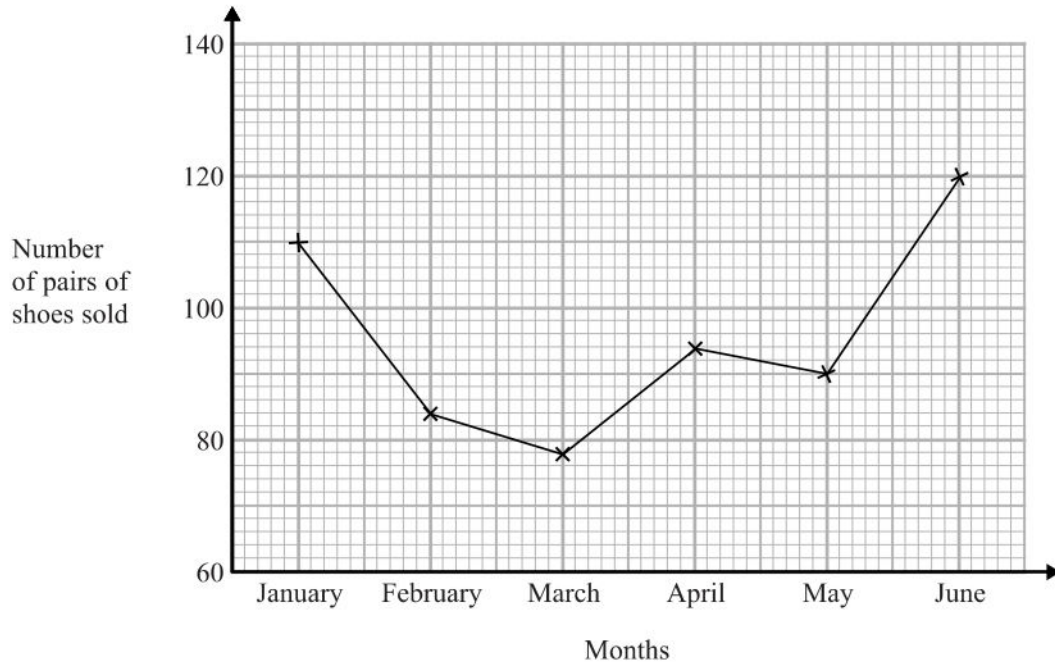
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(Total for Question 11 is 2 marks)

Pearson Edexcel – Specimen 1 - Paper 2 (Calculator) Foundation Tier

10.

22 The time-series graph gives some information about the number of pairs of shoes sold in a shoe shop in the first six months of 2014



The sales target for the first six months of 2014 was to sell a mean of 96 pairs of shoes per month.

Did the shoe shop meet this sales target?  
You must show how you get your answer.

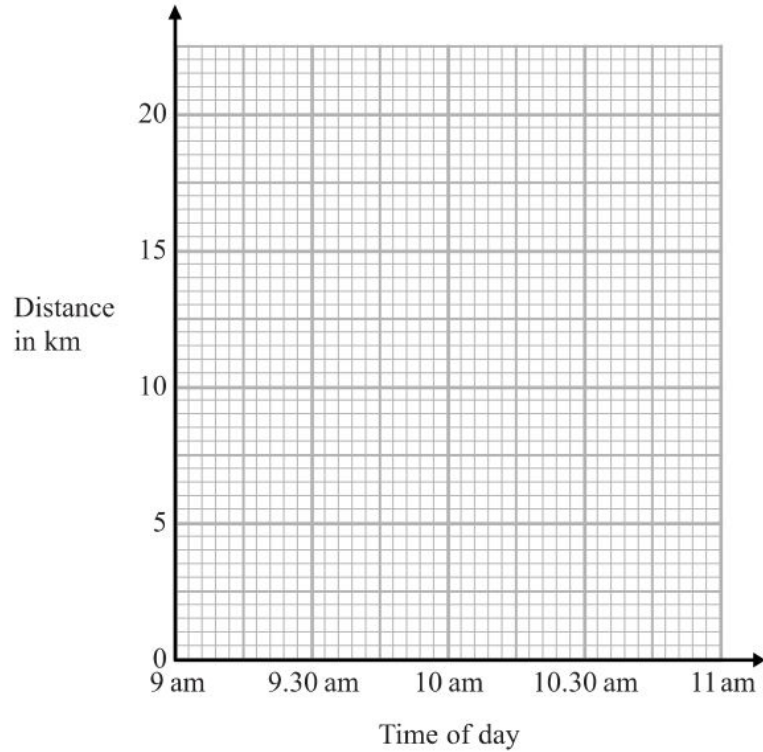
11.

24 At 9 am, Bradley began a journey on his bicycle.

From 9 am to 9.36 am, he cycled at an average speed of 15 km/h.

From 9.36 am to 10.45 am, he cycled a further 8 km.

(a) Draw a travel graph to show Bradley's journey.



(3)

From 10.45 am to 11 am, Bradley cycled at an average speed of 18 km/h.

(b) Work out the distance Bradley cycled from 10.45 am to 11 am.

..... km

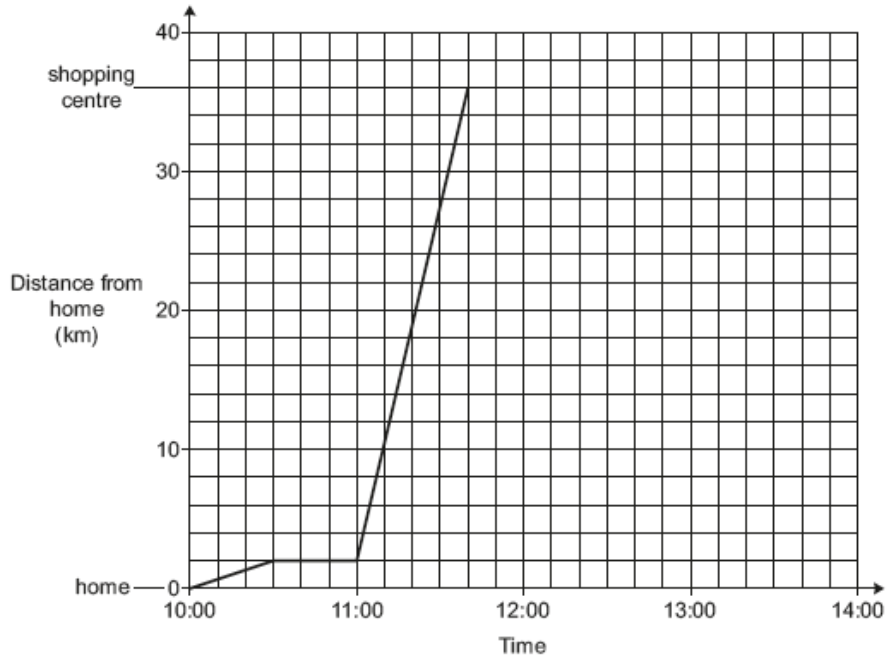
(2)

(Total for Question 24 is 5 marks)

OCR Thursday 6 June 2019 – Morning (Non-Calculator) Foundation Tier

12.

9 The graph shows Sarah's journey from her home to a shopping centre.



(a) State an assumption that has been made when the graph was drawn.

.....  
 ..... [1]

(b) What is the distance from Sarah's home to the shopping centre?

(b) ..... km [1]

(c) Between which two times did Sarah stop?  
 Explain how the graph shows this.

From ..... to ..... shown on the graph by .....  
 .....  
 ..... [2]

(d) (i) Sarah stays at the shopping centre until 13:00.  
 She then travels home without stopping.  
 Her journey home takes 40 minutes.

Complete the graph to show this information.

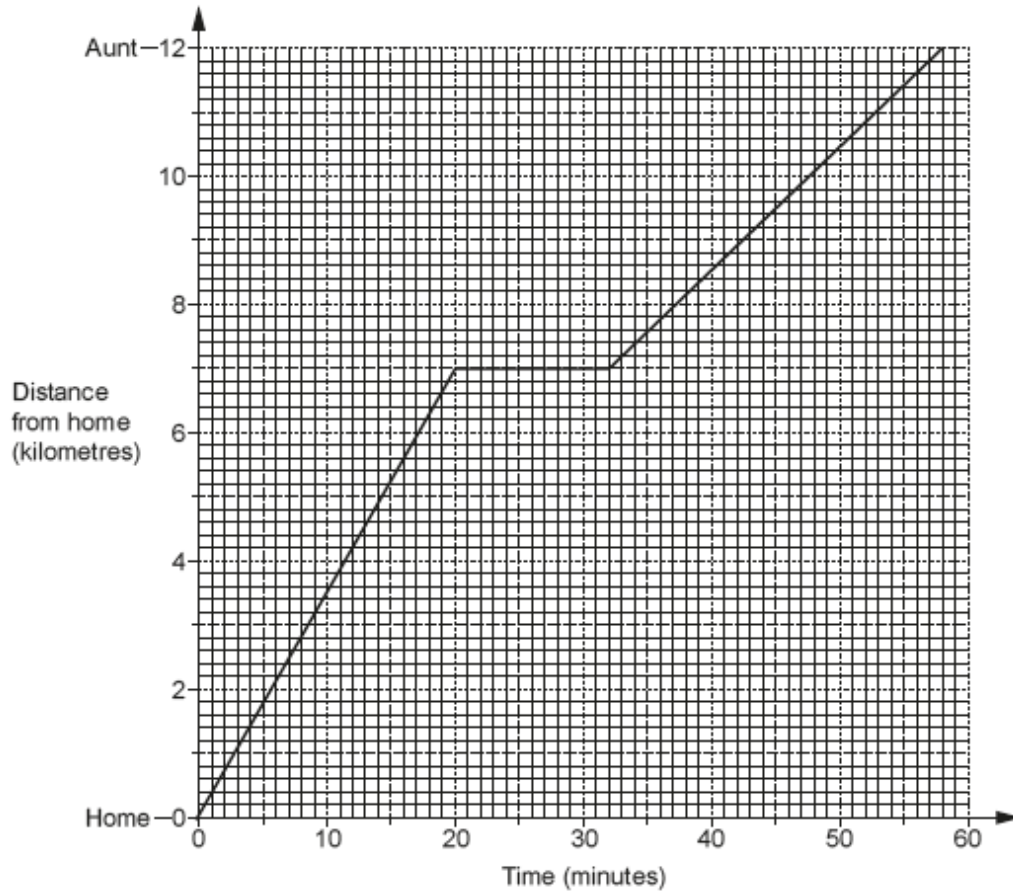
[3]

(ii) Work out Sarah's average speed for her journey home.  
 Give your answer in kilometres per hour.

OCR Thursday 7 June 2018 – Morning (Non Calculator) Foundation Tier

13.

- 17 Viraj cycled from his home to visit his aunt. He drew this graph to show his journey. He stopped at a shop 7 km from his home.



- (a) State one assumption that Viraj made when he drew his graph.

.....  
..... [1]

- (b) For how long did Viraj stop at the shop?

(b) ..... minutes [1]

- (c) Work out Viraj's average speed between his home and the shop.  
Give your answer in metres per minute.

(c) ..... metres per minute [3]

- (d) How can you tell, without doing any calculations, that Viraj's average speed between his home and the shop is greater than his average speed between the shop and his aunt?

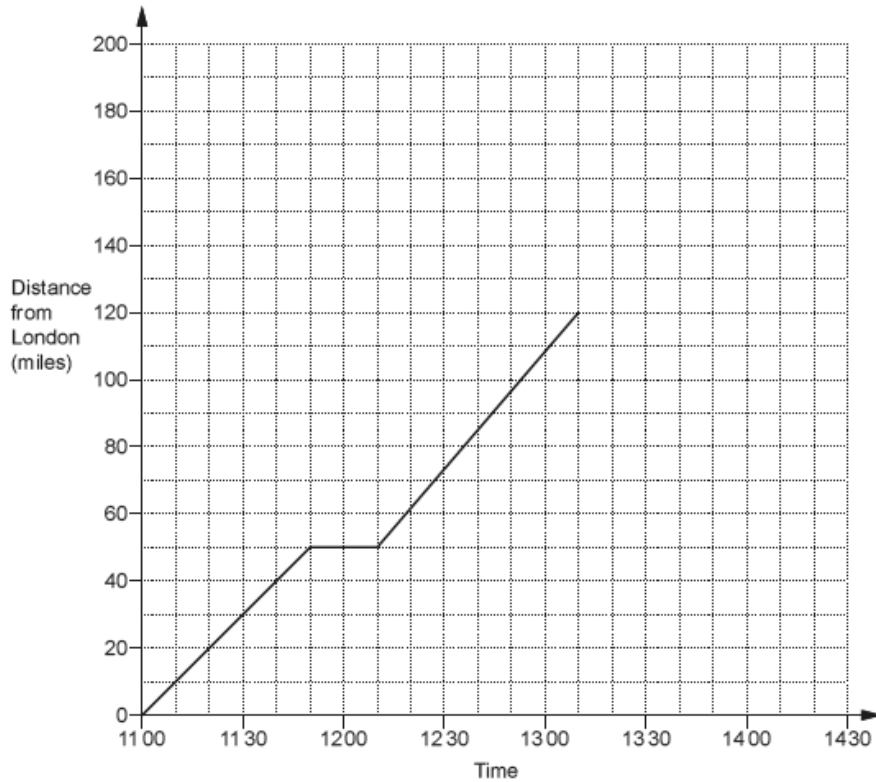
.....

..... [1]

OCR Thursday 2 November 2017– Morning (Calculator) Foundation Tier

14.

- 13 This graph shows part of Lucy's car journey from London to Sheffield.  
The car made one stop at a service station.



Use the graph to answer these questions.

- (a) For how long did the car stop at the service station?

(a) ..... minutes [1]

- (b) Work out the average speed of the car, in miles per hour, between London and the service station.

(b) ..... mph [2]

- (c) Sheffield is 180 miles from London.  
Lucy arrived in Sheffield at 14 20.

Complete the graph.

[2]



OCR Wednesday 8 November 2017– Morning (Calculator) Foundation Tier

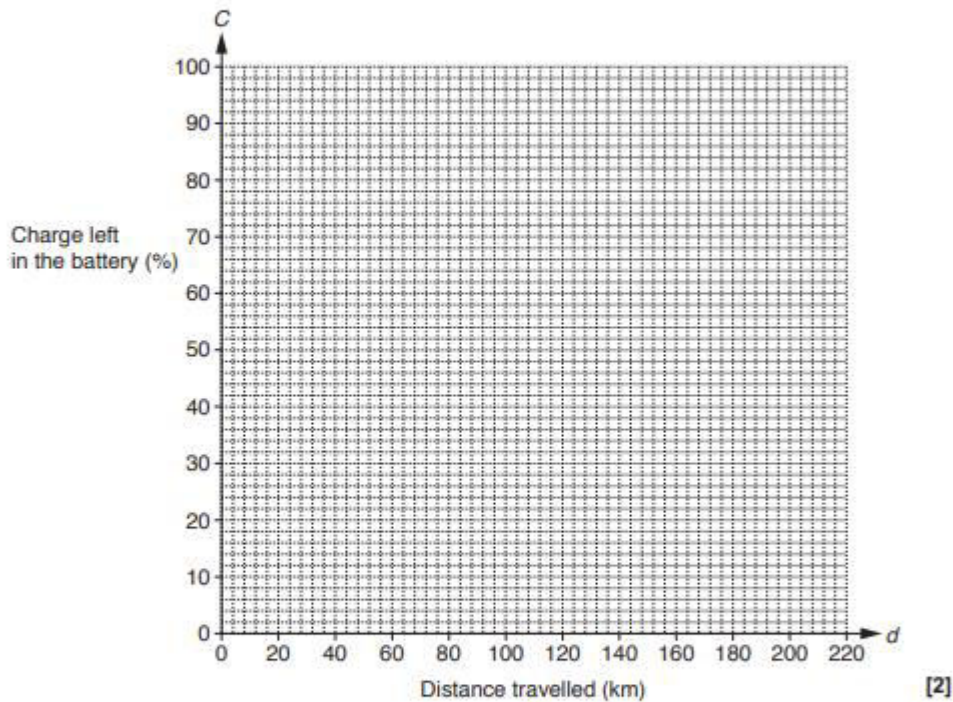
15.

- 11 A company tests a new battery for an electric car.  
The distance the car travels,  $d$  km, and the charge left in the battery,  $C\%$ , are measured.

Some measurements are shown in the table.

Distance travelled, $d$ km.	0	50	100	150
Charge left in the battery, $C\%$ .	100	75	50	25

- (a) Plot these values on the grid and use them to draw a straight line.



- (b) (i) Use your line to estimate the greatest distance the car will travel.

(b)(i) ..... km [1]

- (ii) What assumption is made when estimating the greatest distance?

.....  
 ..... [1]

**(c)** For your line in part **(a)**, find

**(i)** the gradient,

**(c)(i)** ..... [1]

**(ii)** the  $C$ -axis intercept.

**(ii)** ..... [1]

**(d)** Use your answers to part **(c)** to write down the equation of your graph.

Give your equation in the form  $C = ad + b$ .

**(d)**  $C =$  ..... [1]

**(e) (i)** Use your equation to find the value of  $C$  when  $d = 210$ .

**(e)(i)** ..... [2]

**(ii)** Comment on your answer.

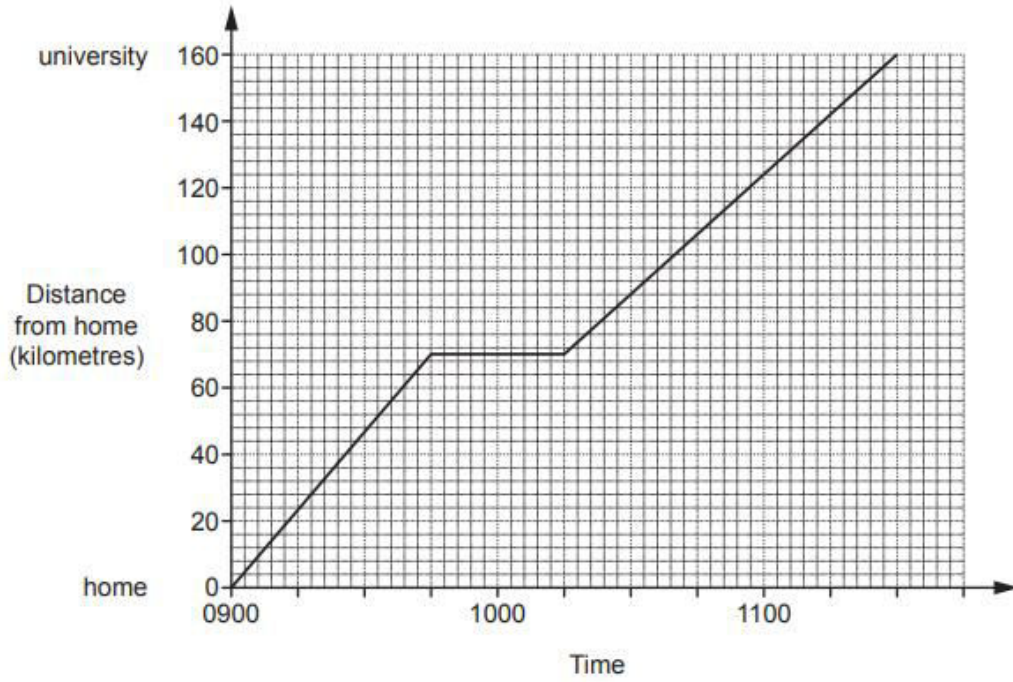
.....

..... [1]

OCR Thursday 8 June 2017 – Morning (Non - Calculator) Foundation Tier

16.

15 The graph shows Mia's journey from her home to university.



Calculate Mia's average speed for the whole journey.

..... km/h [3]

AQA Monday 8 June 2020 – Morning (Calculator) Foundation Tier

17.

25

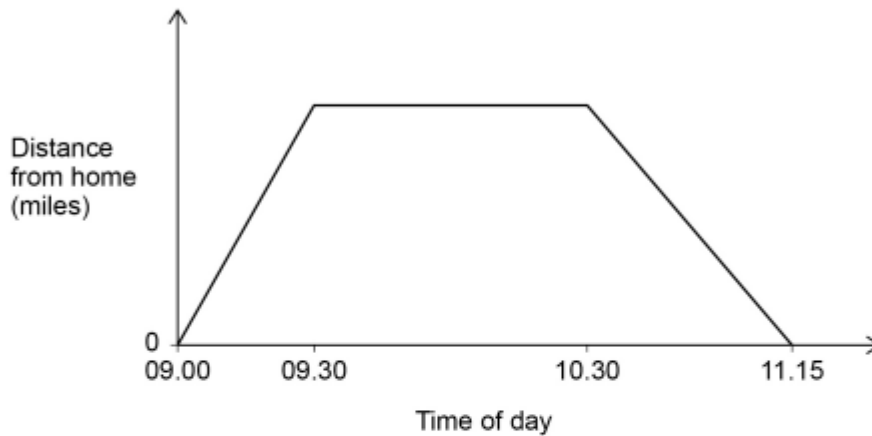
Chris visits a library.

He cycles to the library in half an hour at a speed of 12 miles per hour.

He stays at the library for one hour.

He then cycles home.

The sketch graph represents his visit.



Work out the speed, in miles per hour, at which Chris cycles home.

**[3 marks]**

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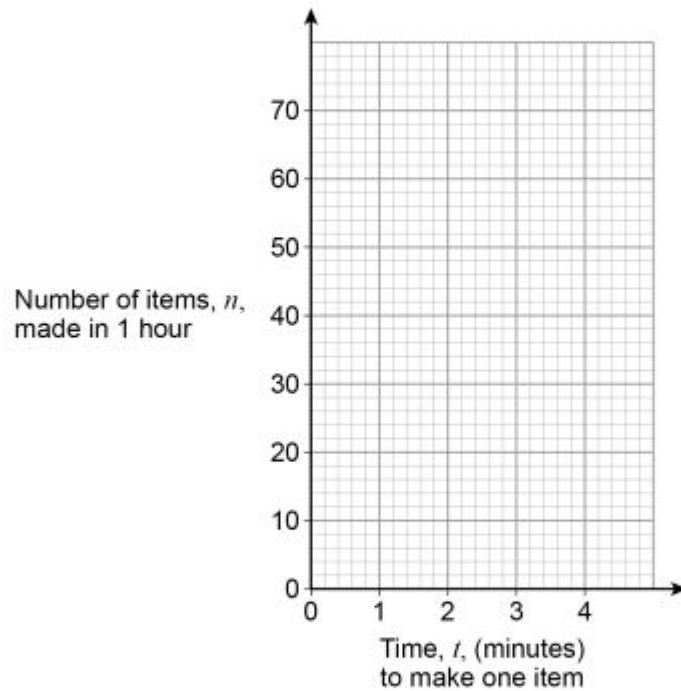
Answer \_\_\_\_\_ mph

18.

- 26 The number of items,  $n$ , made in 1 hour by a machine is given by  $n = \frac{60}{t}$   
 $t$  is the time in minutes the machine takes to make one item.  
The value of  $t$  changes for different types of item.

- 26 (a) On the grid below, draw the graph of  $n = \frac{60}{t}$  for values of  $t$  from 1 to 4

[2 marks]



- 26 (b) The machine takes 3 minutes 30 seconds to make one item.

Use your graph to estimate the value of  $n$ .

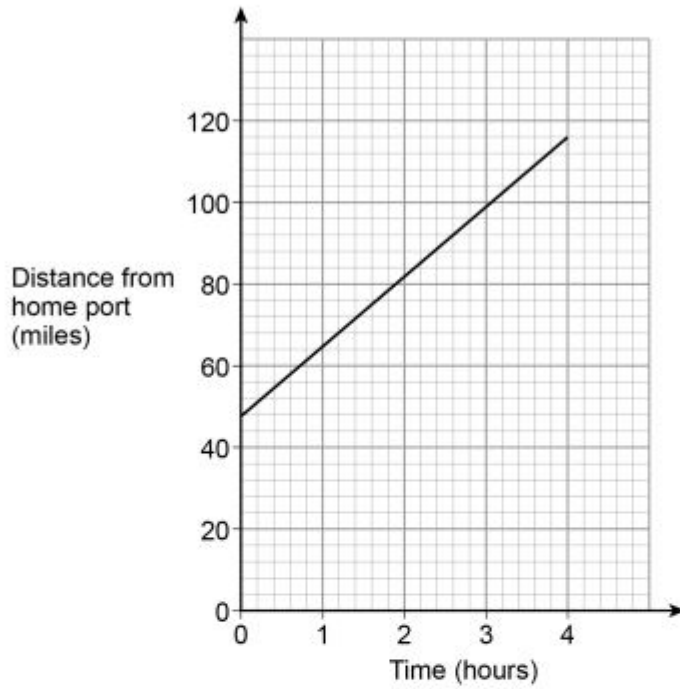
[2 marks]

Answer \_\_\_\_\_

AQA Tuesday 6 November 2018 – Morning (Non-Calculator) Foundation Tier

19.

- 26 A ship is sailing in a straight line from its home port.  
The distance-time graph shows 4 hours of the journey.



Work out the speed of the ship during these 4 hours.

**[3 marks]**

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Answer \_\_\_\_\_ mph

20.

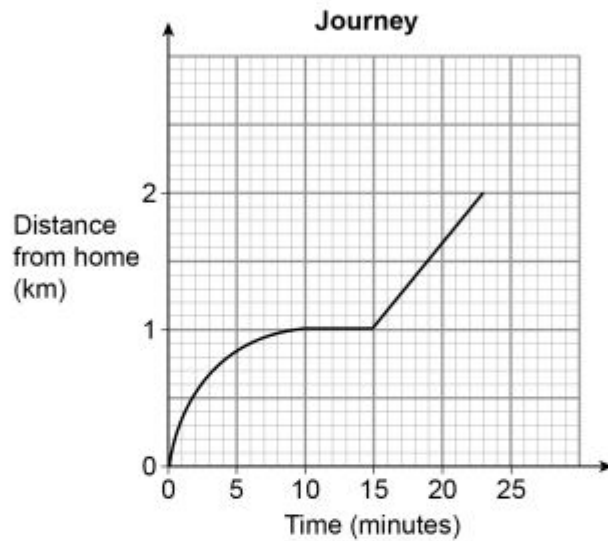
23 Anil's home is 1 km from a shop.

He walked from home to the shop at a constant speed in 10 minutes.

He stayed at the shop for 5 minutes.

He walked home at a constant speed in 8 minutes.

Anil drew this distance-time graph to represent his journey.



Make **two** criticisms of his graph.

[2 marks]

Criticism 1 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Criticism 2 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

AQA Thursday 8 June 2017– Morning (Calculator) Foundation Tier

21.

23 Lily goes on a car journey.

For the first 30 minutes her average speed is 40 miles per hour.

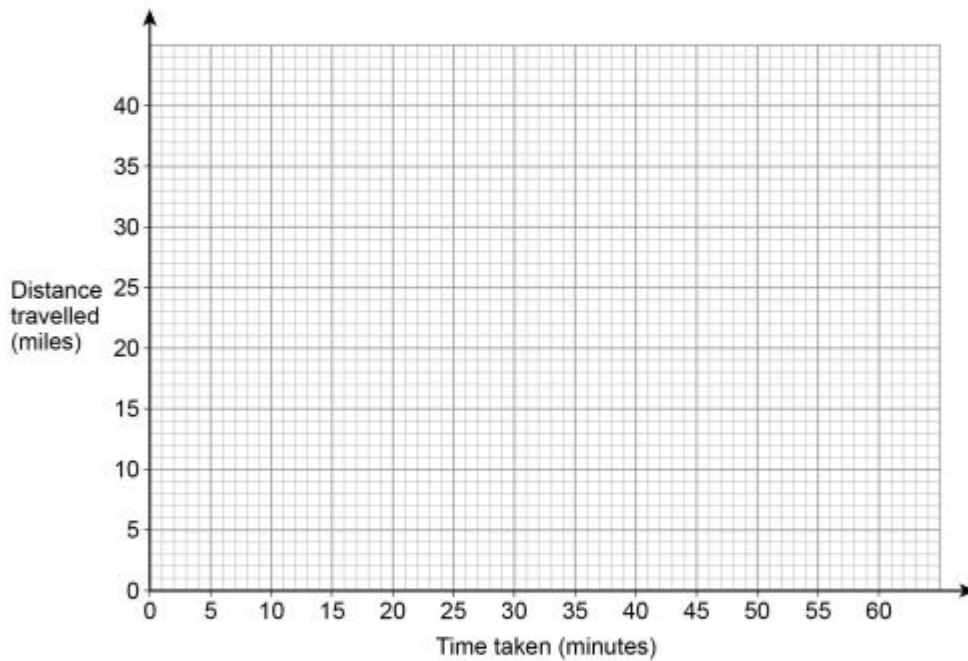
She then stops for 15 minutes.

She then completes the journey at an average speed of 60 miles per hour.

The total journey time is 1 hour.

23 (a) Draw a distance-time graph for her journey.

[3 marks]



23 (b) Write down the average speed for the total journey.

[1 mark]

Answer \_\_\_\_\_ mph