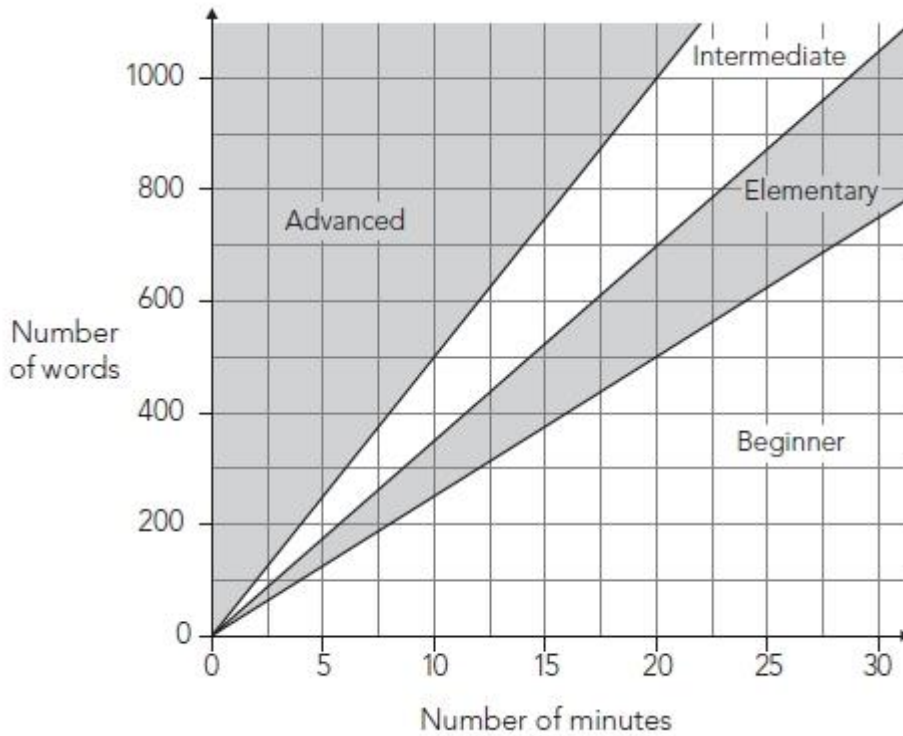


Q1.

How fast you can type accurately is called your typing speed.

The regions of the graph show information about different typing speeds.



Darren's level of typing is **elementary**.

In **20 minutes** he should be able to type between 500 and 700 words.

Jo's level of typing is **intermediate**.

How many words should she be able to type in **20 minutes**?

Between _____ and _____ 1 mark

Kath's typing speed is **30 words per minute**.

What level is Kath's typing?

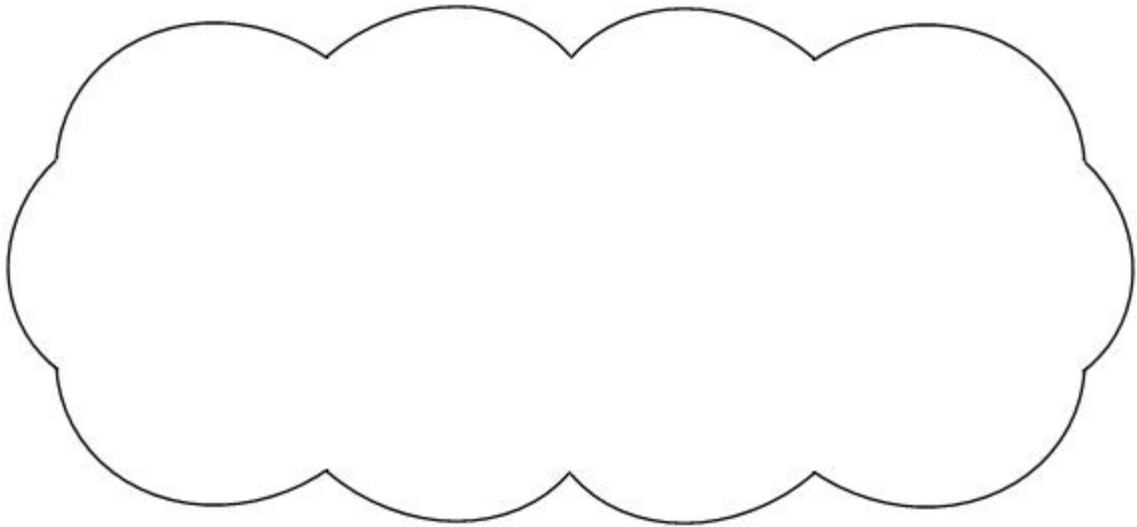
Advanced

Intermediate

Elementary

Beginner

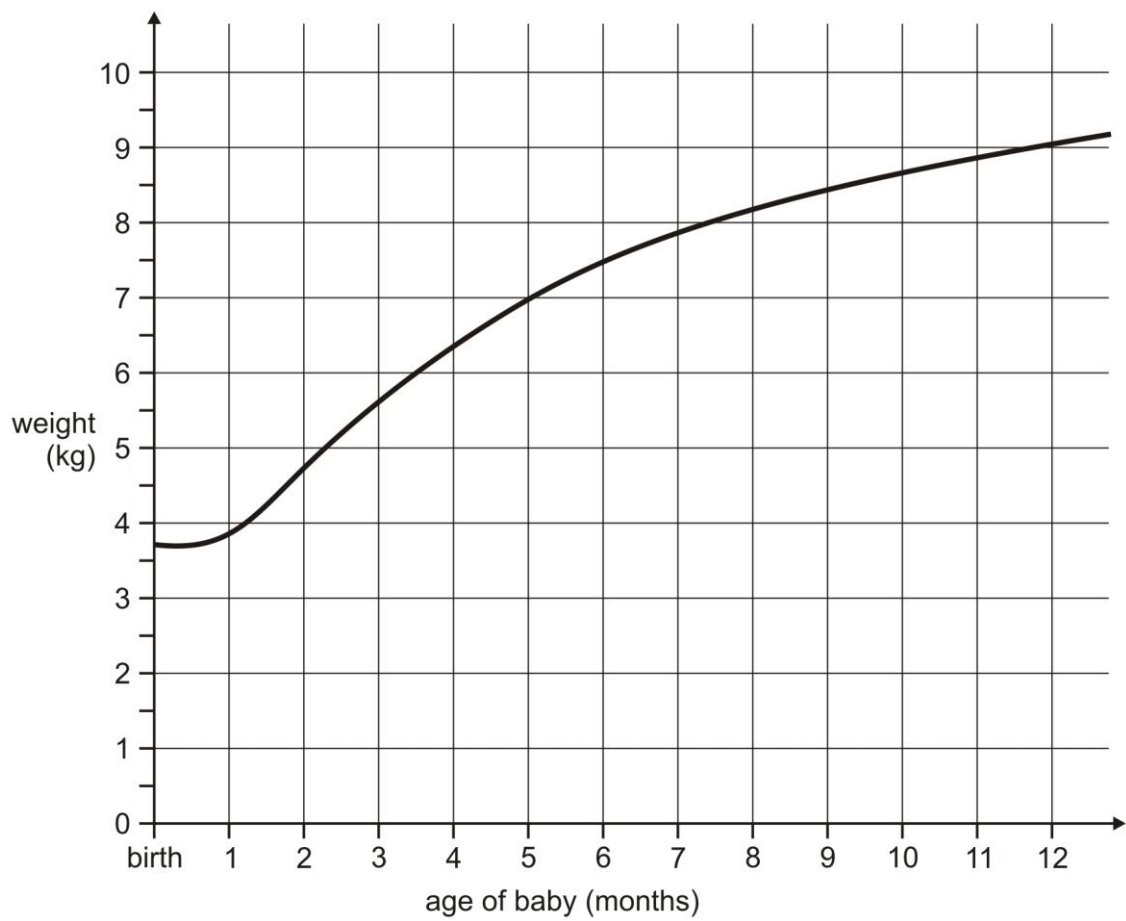
Explain how you know.



1 mark

Q2.

This graph shows how the weight of a baby changed over twelve months.



From the graph, what was the weight of the baby at **10 months**?

1 mark

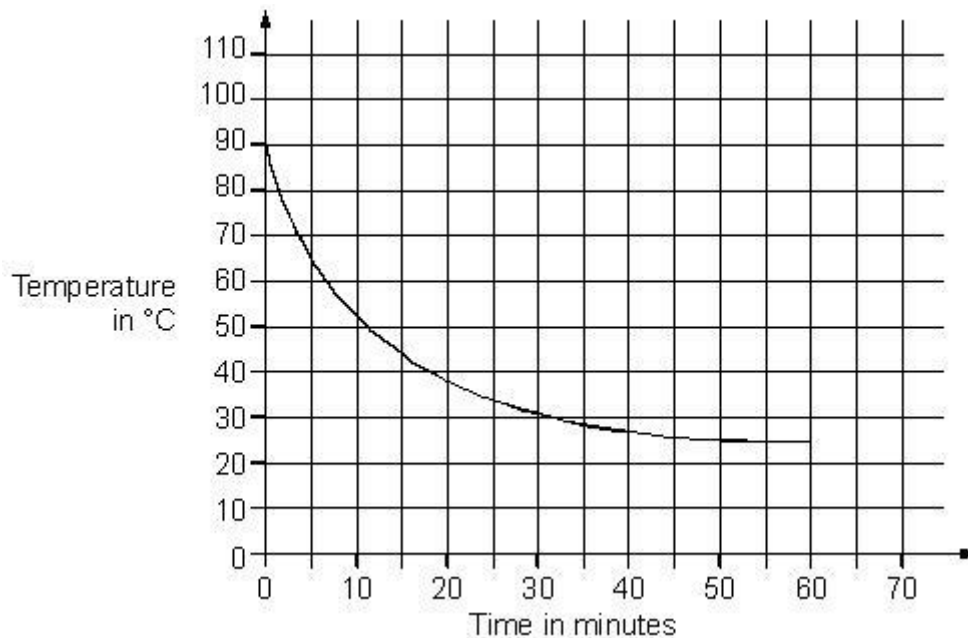
How much **more** did the baby weigh at 5 months than at birth?

1 mark

Q3.

A hot liquid is left to cool in a science experiment.

This graph shows how the temperature of the liquid changes as it cools.



Read from the graph **how many minutes** it takes for the temperature to reach **40°C**

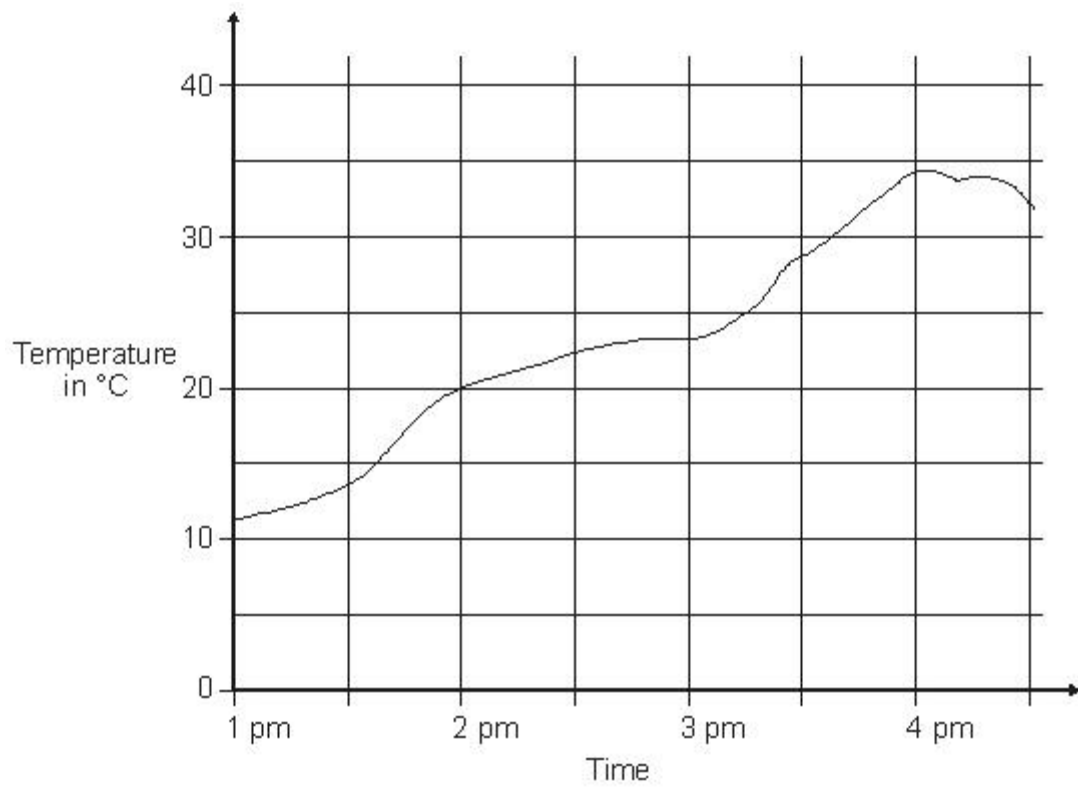
1 mark

Read from the graph **how many minutes** the temperature is **above 60°C**

1 mark

Q4.

This graph shows the temperature in a greenhouse.



Use the graph to find the time when the temperature was 25°C.

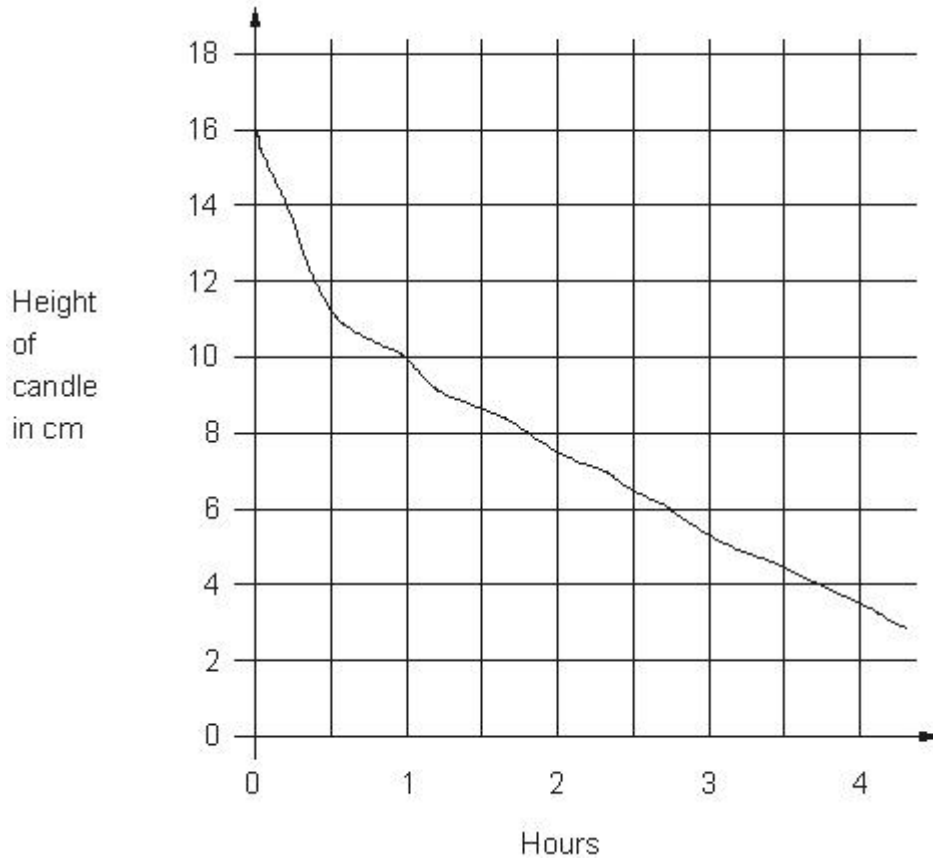
1 mark

Use the graph to find the difference between the temperature at 2 pm and the temperature at 4 pm.

1 mark

Q5.

This graph shows the height of a candle as it burns.



Look at the graph.

What is the height of the candle after 2 hours?

cm

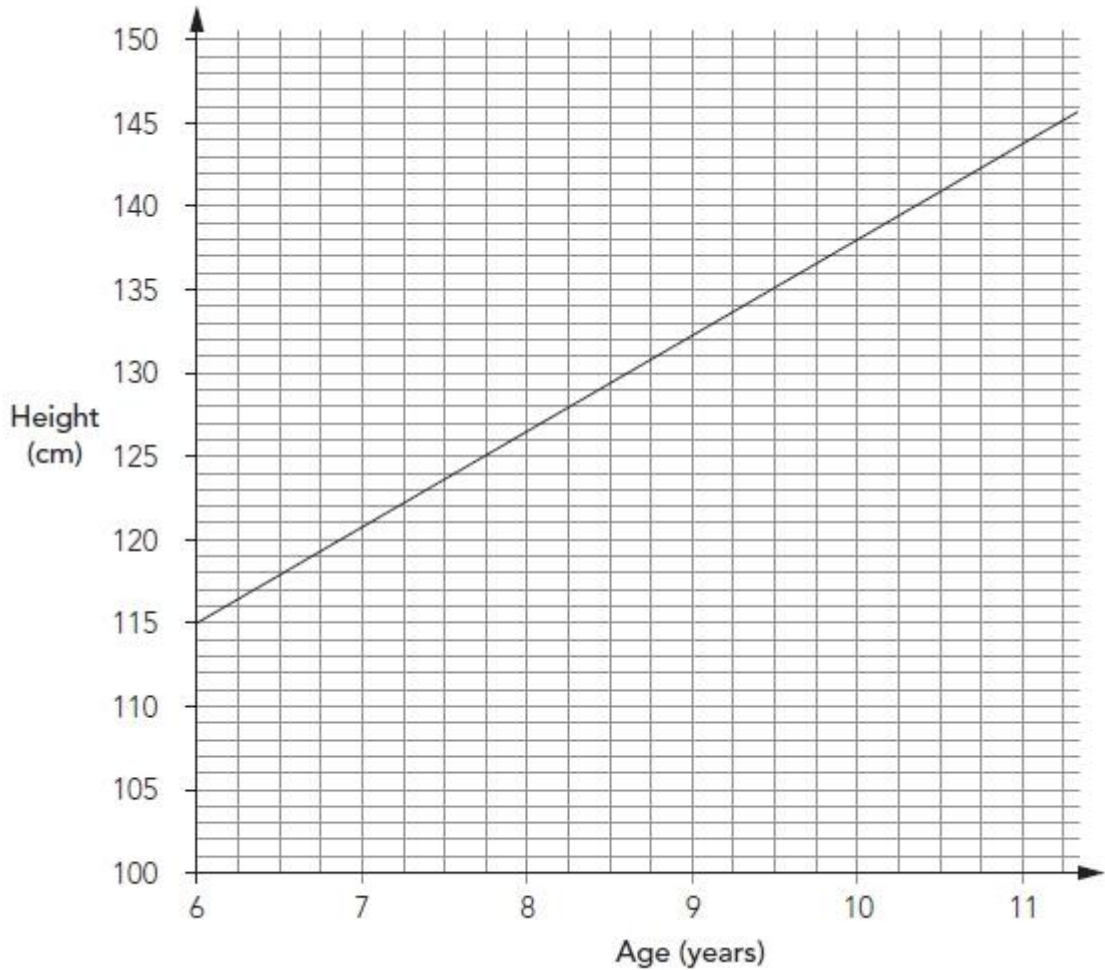
1 mark

How long does the candle take to burn down from 16 cm to 4 cm?

1 mark

Q6.

The graph shows the average heights of girls in the UK from age 6 – 11 years.



Emily is **1.38 m** tall.

She is the **average** height for her age.

How old is she?

1 mark

Zoe is $9\frac{1}{2}$ years old.

She is also 1.38 m tall.

How much taller than average is she?

Give your answer in centimetres.

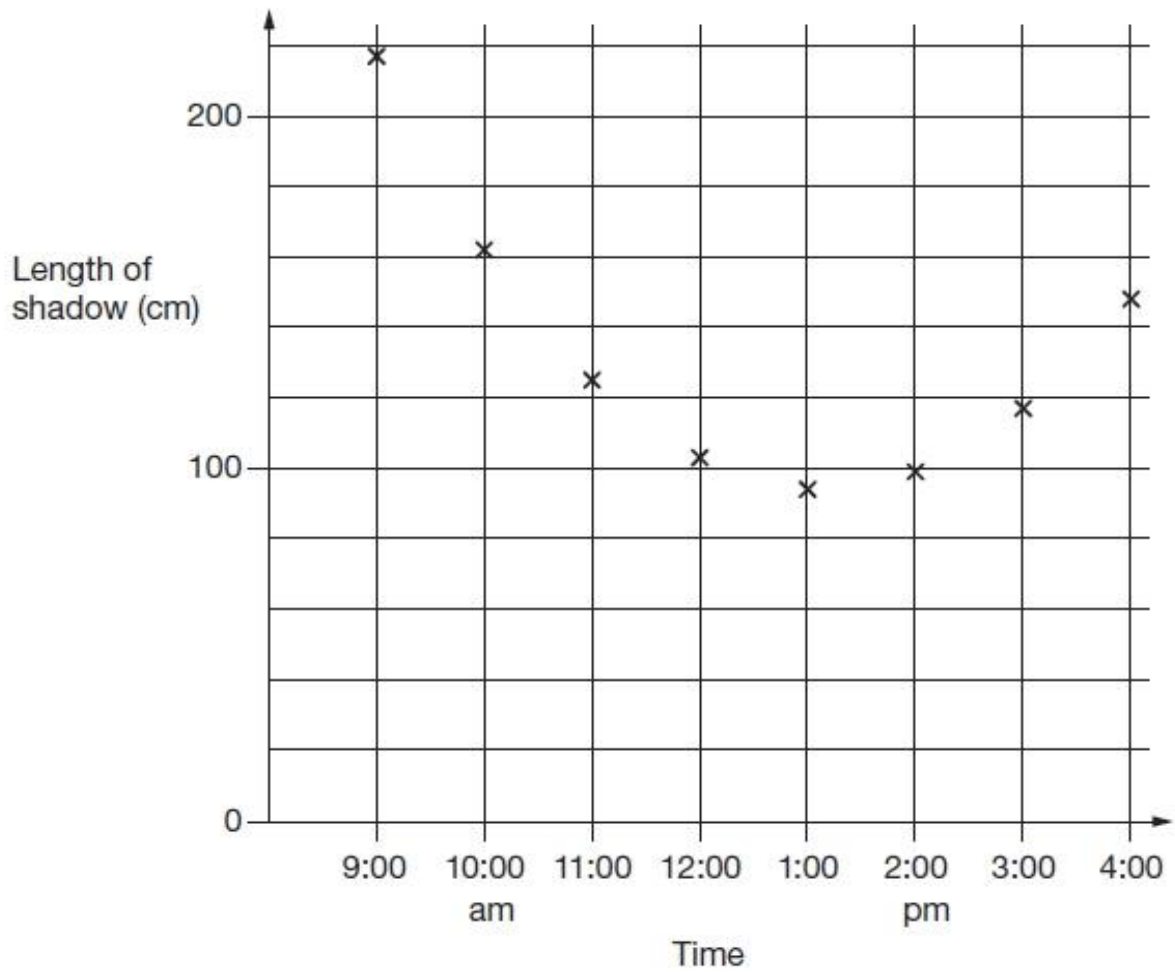
 cm

1 mark

Q7.

Kirsty measured the length of her shadow every hour on one sunny day.

She plotted her results on this graph.



Look at the graph.

Estimate the length of Kirsty's shadow at 3:30 pm.

cm

1 mark

Estimate a time when her shadow was 180 centimetres long.

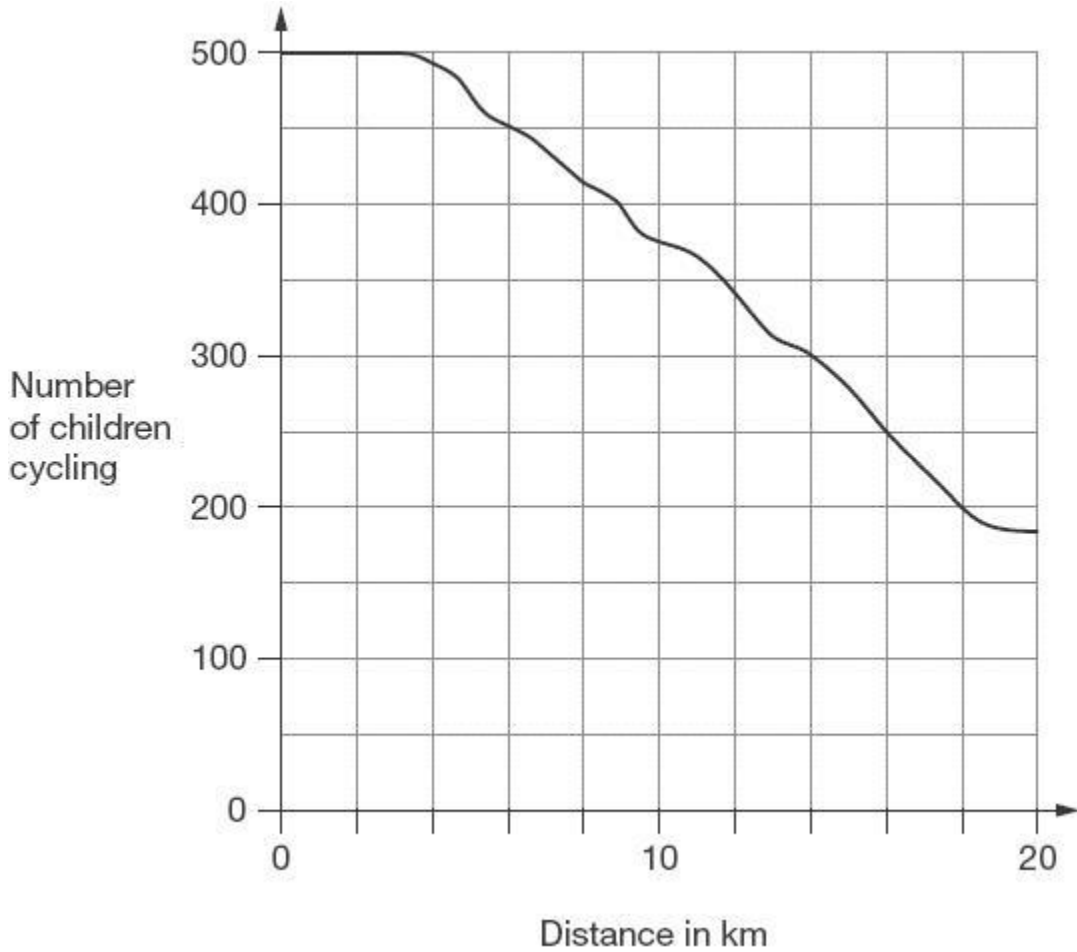
:

1 mark

Q8.

500 children started a 20 kilometre sponsored cycle ride.

This graph shows how far they cycled.



At what distance were exactly half of the children still cycling?

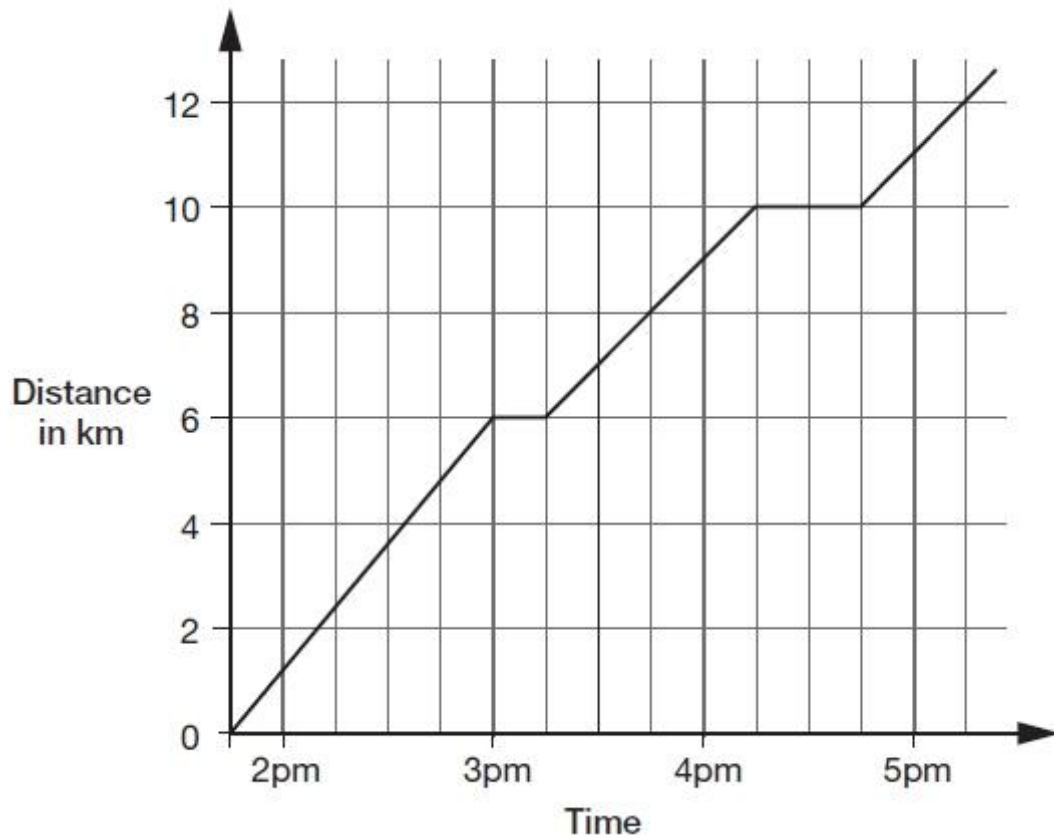
1 mark

Estimate how many children completed the 20 kilometre cycle ride.

1 mark

Q9.

This graph shows the distance Alfie and Chen walked in an afternoon. They started at 1:45pm and had two breaks.



How many kilometres did they walk **between** the first and second breaks?

1 mark

At what time did Alfie and Chen start their second break?

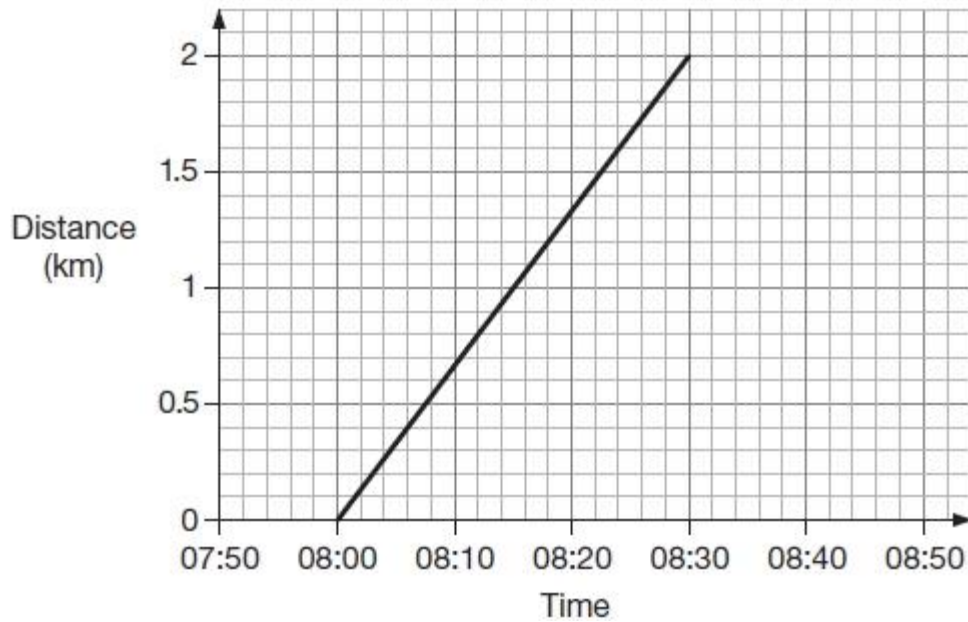
1 mark

Q10.

Alfie and his brother walked from home to their school.

Their school is 2 kilometres from home.

The graph shows information about **Alfie's** journey.



- (a) How does the graph show that Alfie walked at a **constant speed** for all of his journey?

1 mark

- (b) Alfie's brother left home **10 minutes before** Alfie.

He arrived at school **20 minutes after** Alfie.

He walked at a **constant speed** for all of his journey.

At what time did Alfie overtake his brother?

1 mark

Mark schemes

Q1.

- (a) Gives both correct values, ie

700 (or 701) and 1000 (or 999)

(in either order)

1

- (b) Indicates Elementary and gives a correct explanation that places the speed clearly within the correct section on the graph, eg:

- 30 words in one minute is 300 words in ten minutes
- 30 wpm = 900 words in 30 minutes
- Darren is between 25 and 35 words per minute so she is the same as Darren

Accept minimally acceptable explanation, eg:

- 300 every 10
- Point equivalent to 30 words per minute
(eg 300 words in 10 minutes) clearly indicated on the graph
- 25-35, same as Darren
- $20 \times 30 = 600$

! Small number of minutes used, where regions are closer together

Accept points equivalent to 30 words per minute where the number of minutes is 2.5 or greater

eg, accept

- 30 words in one minute is 75 words in $2\frac{1}{2}$ minutes
eg, do not accept
- *I looked at 1 minute on the graph and found where 30 words is on the graph*

Do not accept incomplete explanation, eg:

- *I read up from 10 minutes*
- *Between 25 and 30 words per minute*
- *Same as Darren*

1
U1

[2]

Q2.

- (a) Any value in the range 8.6 to 8.8 inclusive.

1

- (b) Any value in the range 3.2 to 3.4 inclusive.

1

[2]

Q3.

- (a) Answer in the range 18 minutes to 19 minutes inclusive. 1
- (b) Answer in the range 6 minutes to 7½ minutes inclusive. 1

[2]

Q4.

- (a) Answer in the range 3:10 pm to 3:20 pm inclusive. 1
- (b) Answer in the range 13 degrees to 14 degrees inclusive.
The answer is a specific time (see page 5 for guidance). 1

[2]

Q5.

- (a) Answer in the range 7.25 cm to 7.75 cm inclusive. 1
- (b) Answer in the range 3 hours 40 minutes to 3 hours 50 minutes inclusive.
Answer is a time interval (see General guidance: responses involving time for guidance) 1

[2]

Q6.

- (a) 10 years old 1
- (b) 3 cm
*Accept answers in the range of 2.9 – 3.1 inclusive
! Change of unit, eg 0.03 m
Condone, provided cm is replaced by m* 1

[2]

Q7.

- (a) Answer in the range 125 cm inclusive to 140 cm exclusive
Do not accept 140 cm. 1
- (b) Answer in the range 9:30 am to 9:50 am inclusive
Accept an answer in the range 4:30 pm to 4:50 pm inclusive.

1

[2]

Q8.

(a) 16

1

(b) A whole number in the range 180 to 190 inclusive

1

[2]

Q9.

(a) 4 km

1

(b) 4:15pm

The answer is a specific time

1

[2]

Q10.

Gives a correct interpretation of the graph, eg:

- It is a straight line
- It goes up steadily
- The angle of the line stays the same
- The gradient of the line is constant

Accept minimally acceptable explanation, eg:

- *It is straight*
- *It doesn't bend*
- *It is a diagonal*

Do not accept incomplete or ambiguous explanations that do not sufficiently imply a constant speed and / or do not demonstrate the relationship holds for the entire graph, eg:

- *The line goes straight up*
- *It is not wobbly*
- *It is level*
- *Every 5 mins he walks the same distance*
- *He walks 1km in the first 15 mins and 1km in the second 15 mins*

! *Values read from graph*

Accept, provided it is clear the relationship holds for the entire graph.

Values should be accurate within +/- 0.1km and / or +/- 2 minutes, eg:

- *0.7km every 10 minutes*

- *Every 7.5 minutes he walks about half a km*

! Calculation of kilometres per hour

Accept values in the range 3.7 to 4.3km per hour inclusive.

1

(b) 08:10

! Accept values between 08:09 and 08:11 inclusive

! Time

1

[2]