

**WEEK: 11**

**Week Beginning: (01/06/20)**

**Subject: MATHS**

**Year: 6**

### **Lesson Objective:**

- An introduction to KS2 statistics
- Understand the key features of different graphs including line graph, pie charts, pictograms, bar charts and time graphs
- Be able to solve word problems relating to graphs

### **Class Worksheets**

- Worksheets on a range of graphs and word problems
- Be able to answer questions that require an explanation for answer

### **Homework**

- Complete graph SATs questions to apply learning from lesson

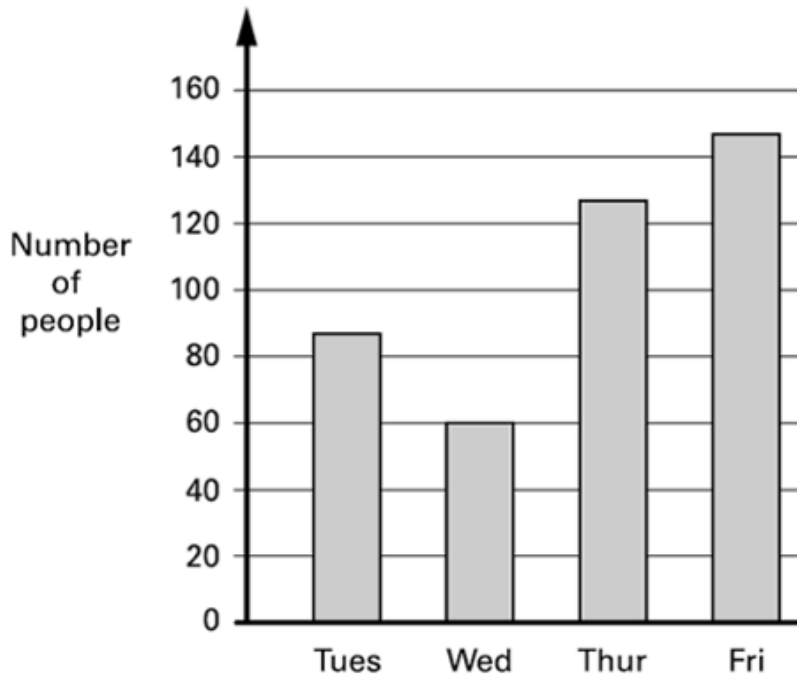
### **Additional Notes**

- All lesson worksheets and homework for next week (due Week 12) worksheets can be found below
- Week 10 homework will be marked in lesson hence make sure it is fully completed

**Please print 2 a page or open this document during the lesson to save paper!**

10

This bar chart shows how many people went to a school play.




Estimate the number of people who went there on **Thursday** and **Friday** altogether.





Each person paid **£2.25** for a ticket to get in.

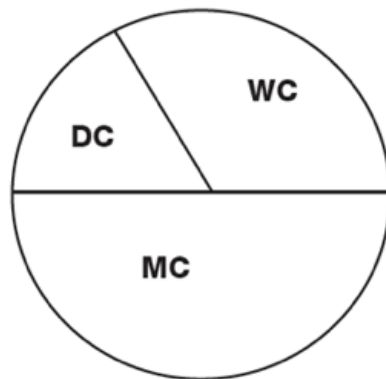
How much **ticket money** was collected on **Wednesday**?



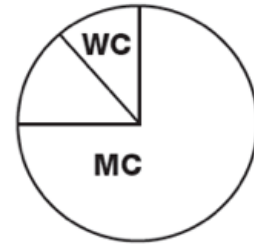
12

100 girls and 60 boys were asked which kind of chocolate they like best.

These two pie charts show the results.



100 girls



60 boys

MC = Milk chocolate, WC = White chocolate, DC = Dark chocolate

Anil says, "The pie charts show that more girls than boys liked milk chocolate best."

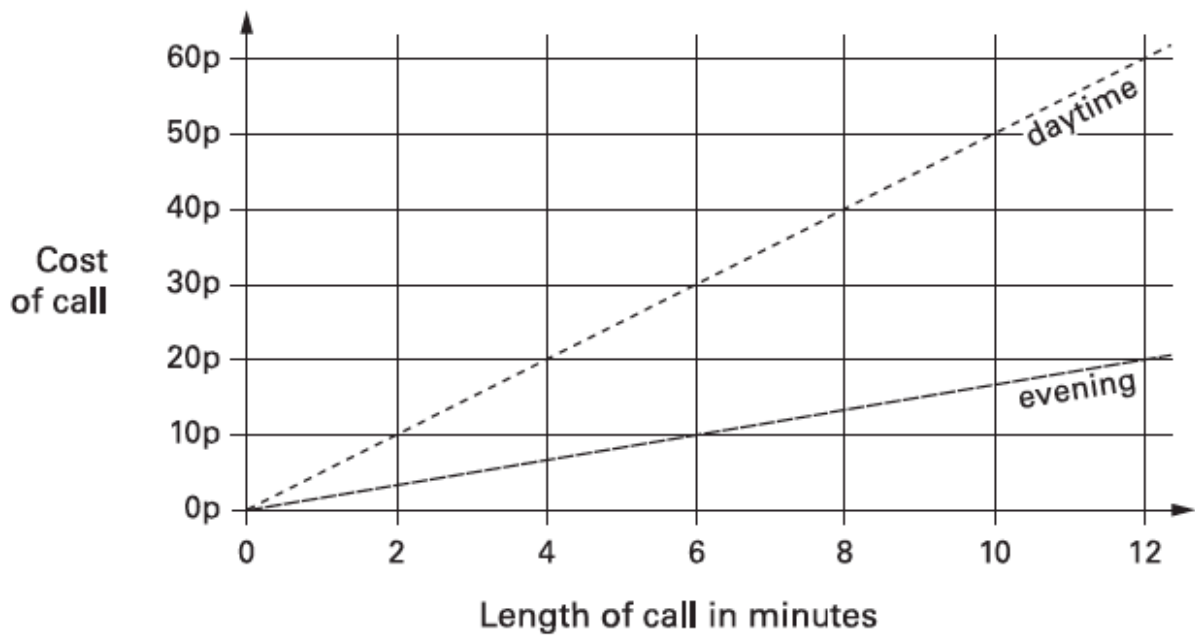
Anil is correct.

**Explain** how you know.

1 mark

10

This graph shows the cost of phone calls in the daytime and in the evening.



How much does it cost to make a **9 minute** call in the **daytime**?



How much **more** does it cost to make a **6 minute** call in the **daytime** than in the **evening**?

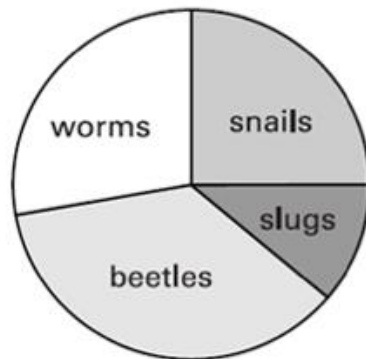
Tony and Gemma looked for snails, worms, slugs and beetles in their gardens.



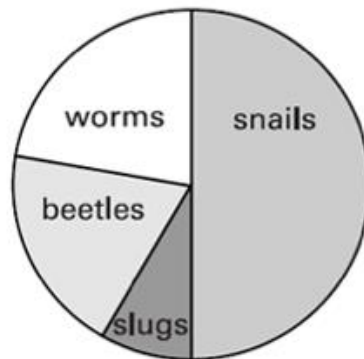
They each made a pie chart of what they found.

Tony's pie chart

Gemma's pie chart




Total 80




Total 36

Estimate the number of worms that Tony found.



Who found more snails?  
Circle Tony or Gemma.

 Tony / Gemma

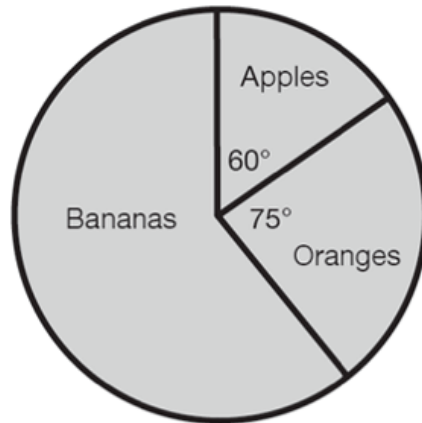
Explain how you know.



23

A shop sells fruits like Bananas, Apples and Oranges.

This pie chart shows the sales of each in one week.



Estimate the **ratio** of the sales of Apples to Oranges?

1 mark

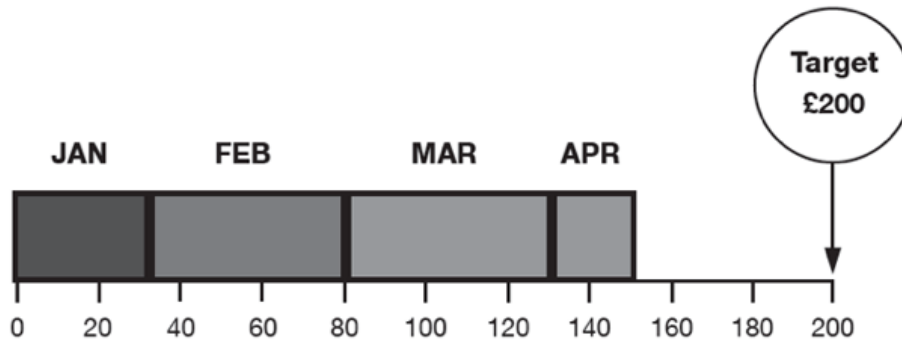
This week, total of 240 fruits were sold.

Estimate **how many** bananas were sold.

1 mark

9

A school plans to collect £200 between January and May for charity. This chart shows how much they collected by the end of April.



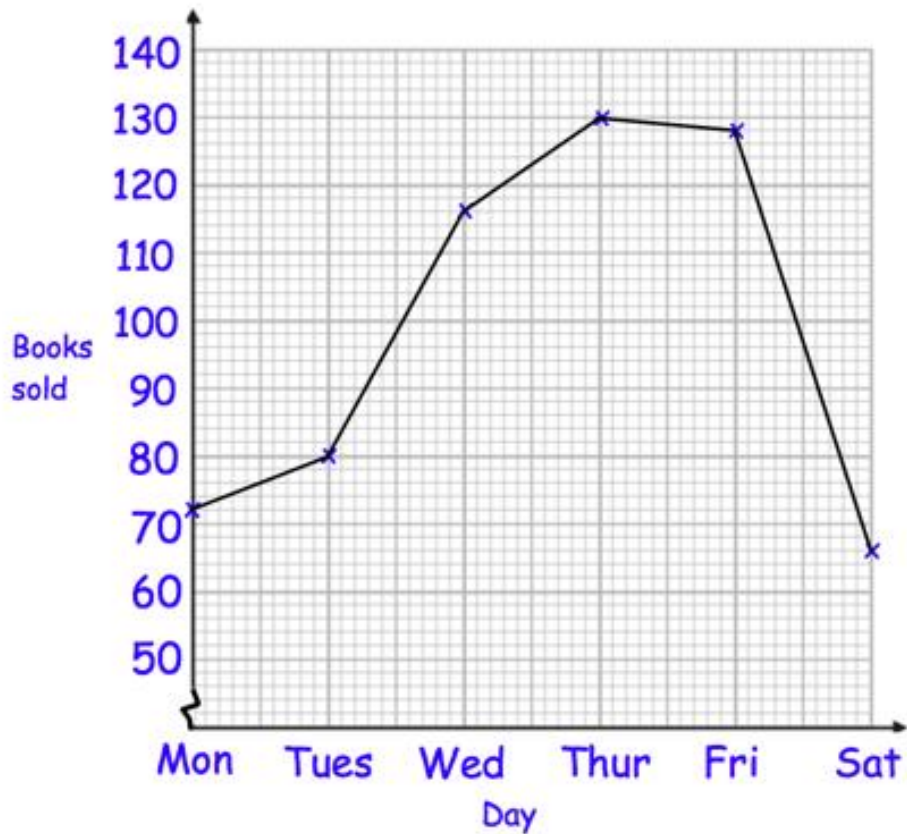
Write the name of **each** month where they collected more than £40.

\_\_\_\_\_

How much money is still left to be collected?

2 marks

1. Below is a line graph that shows how many books are sold in a charity shop over one week.



- (a) On which day did the charity shop sell the most books?

.....  
(1)

- (b) On which day did the charity shop sell the least books?

.....  
(1)

- (c) How many books were sold on Tuesday?

.....  
(1)



25

The following table shows the data of the temperature of cities at midday and midnight.

City	Temperature	
	At midnight	At Midday
Warsaw	- 7°C	- 4°C
Rome	2°C	- 2°C
Paris	3°C	- 6°C
Oslo	10°C	- 13°C

At **midday**, how many degrees colder was **Oslo** than Warsaw?

Degrees

1 mark

Which city was **coldest** at midnight?

1 mark

18

John asked 80 children to choose their favourite flavour of jam. These were his results.

Flavour	Number of children
Raspberry	20
Lemon	8
Orange	16
Blackcurrant	36
<b>Total</b>	<b>80</b>

What **percentage** of the children choose blackcurrant?

1 mark

The table shows the cost of coach tickets to different cities.

		Hull	York	Leeds
Adult	single	£12.50	£15.60	£10.25
	return	£23.75	£28.50	£19.30
Child	single	£8.50	£10.80	£8.25
	return	£14.90	£17.90	£14.75

What is the total cost for a **return** journey to York for one adult and two children?



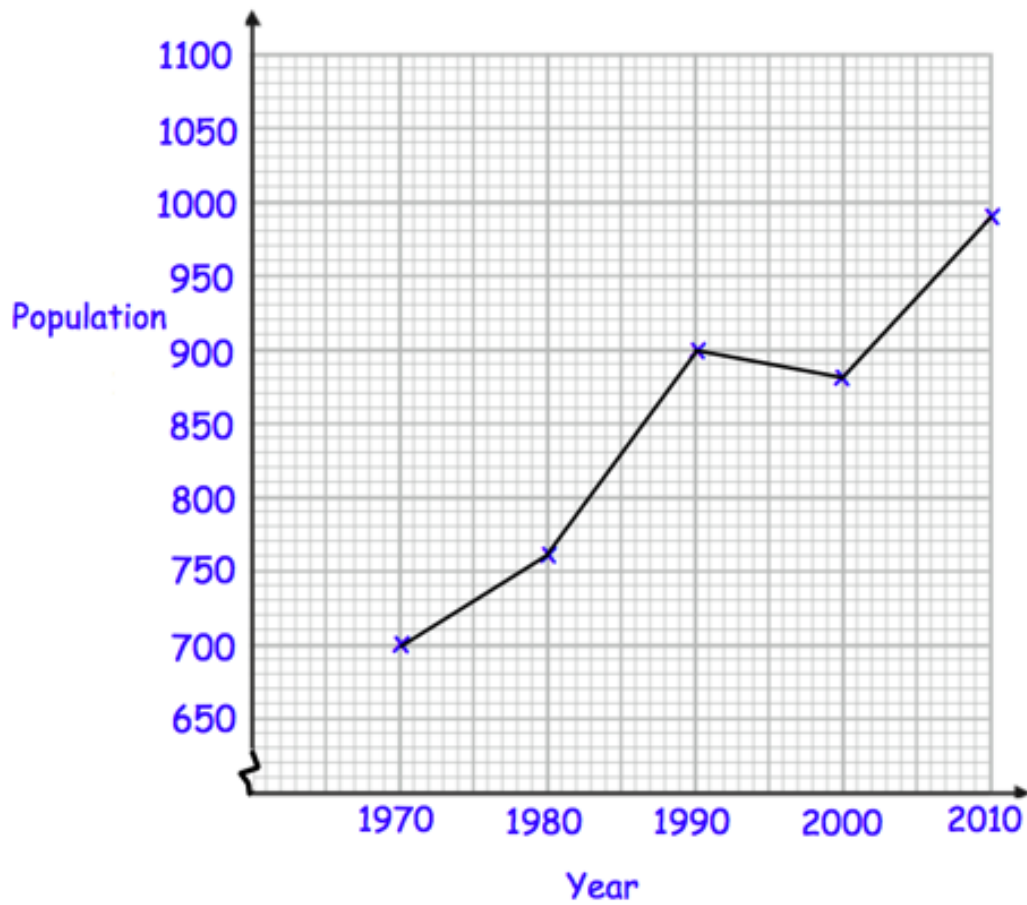
£

How much **more** does it cost for two adults to make a **single** journey to Hull than to Leeds?



£

2. Below is a line graph that shows the population of a village.



(a) What was the population in 1980?

.....  
(1)

(b) In which year was the population 700?

.....  
(1)

The population is expected to increase by 120 by 2020.

(c) Work out the expected population in 2020.

.....  
(2)

A student appeared for exams of years 6.



He scored 84 marks in Maths, 73 Marks in History, 64 Marks in Geography  
72 Marks in English and 92 in Science.

Find the **average score** of his marks.

Show  
your  
method

A large rectangular grid for showing the method. The grid is 20 units wide and 10 units high. A small empty rectangular box is located in the bottom right corner of the grid, intended for the final answer.

1 mark

8

Here is a timetable for the morning bus from Winton to Yansley.

<b>Winton</b>	9:35	9:55	10:15	10:35
<b>Ingham</b>	9:45	10:05	10:25	10:45
<b>Carston</b>	10:01	10:21	10:41	11:01
<b>Dubley</b>	10:23	10:43	11:03	11:23
<b>Yansley</b>	10:55	11:15	11:35	11:55

How many **minutes** does the bus take in total to get from Winton to Dubley?

minutes

1 mark

Chen is in Ingham. He wants to be in Dubley before 11.25 am.

What is the **time** of the **latest** bus he can take from Winton?

:

1 mark

A school has sports day.

The winner of each event scores **10 points**.

This chart shows the points scored by each team.

Event	Team				
	Red	Green	Blue	Yellow	White
100m	8	6	2	10	4
Long jump	10	2	6	4	8
Relay	4	6	8	10	2
High jump	8	2	10	6	4

How many events did the Yellow team win?



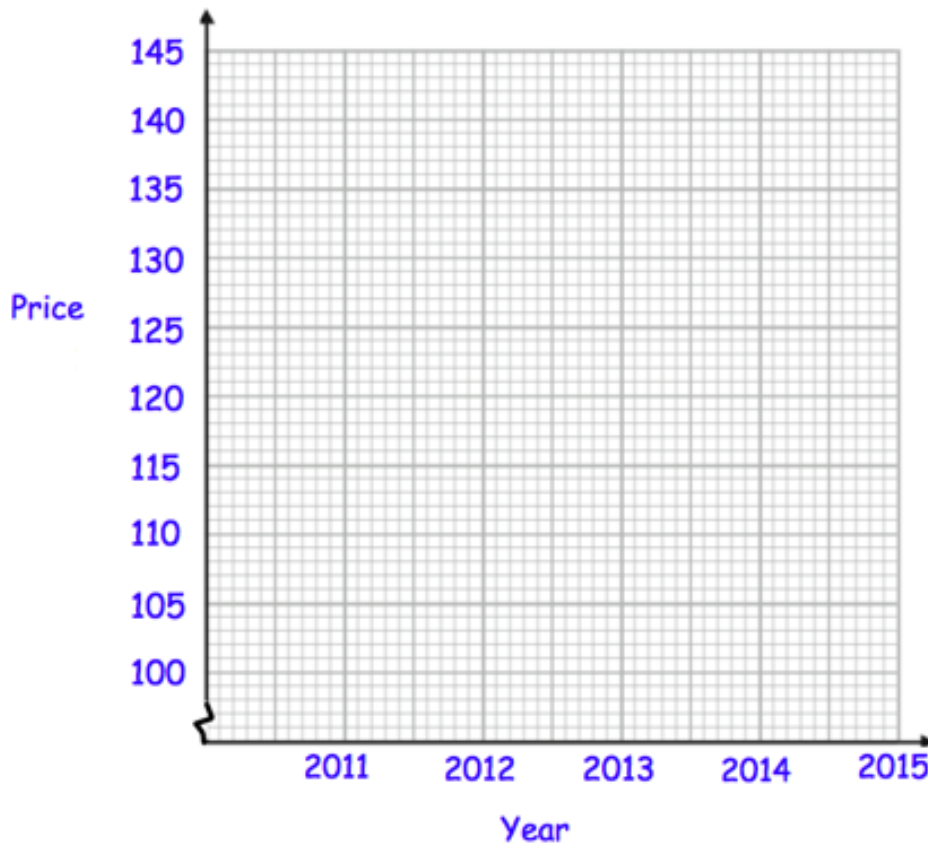
Which team came second in the relay?



3. The table shows the average price of unleaded petrol in England over 5 years.

Year	Price in pence
2011	111
2012	128
2013	133
2014	132
2015	108

(a) Draw a line graph for the data



(2)

(b) Between which two consecutive years did the price increase the most?

..... and .....

(1)



**6**The **table** below shows the opening times of the park

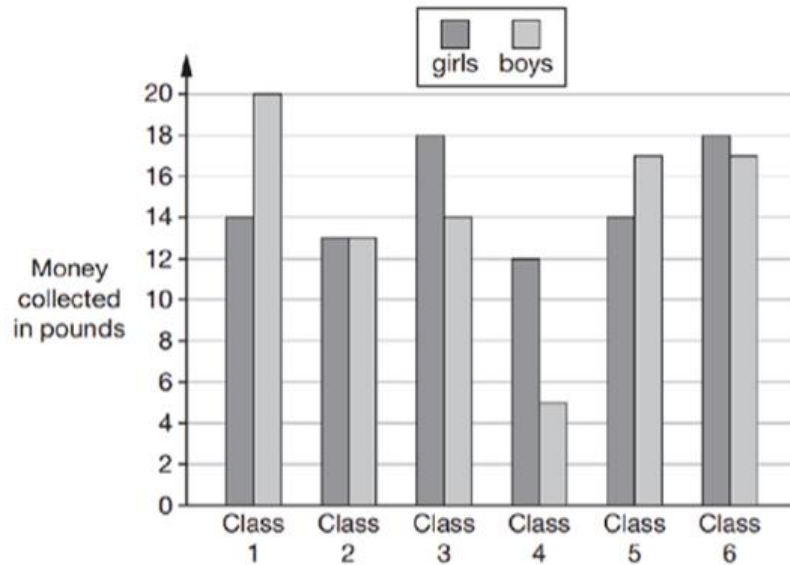
Park timings	
Monday	7am to 2pm 4pm to 7pm
Tuesday	7am to 2pm 4pm to 7pm
Wednesday	7am to 2pm 4pm to 7pm
Thursday	7am to 9pm
Friday	7am to 9pm
Saturday	6am to 10pm
Sunday	6am to 10pm

How many **hours** is the park open on **Wednesday**?1 markOn which days is the park open for **longest hours**?  
1 mark

11

Six classes at Modern Primary School collected some money.

The money collected by boys and girls is shown in the chart below:



In Class 1, how much **more money** did the boys collect than the girls?

1 mark

How many **classes** collected more than **£25**?

1 mark

Here is a part of a train timetable.

Edinburgh	–	09:35	–	–	13:35	–	–
Glasgow	09:15	–	11:15	13:15	–	13:45	15:15
Stirling	09:57	–	11:57	13:57	–	14:29	15:57
Perth	10:34	10:51	12:34	14:34	14:50	15:15	16:35
Inverness	–	13:10	–	–	17:05	–	–

How long does the first train from Edinburgh take to travel to Inverness?



Ellen is at Glasgow station at 1:30pm.

She wants to travel to Perth.

She catches the next train.

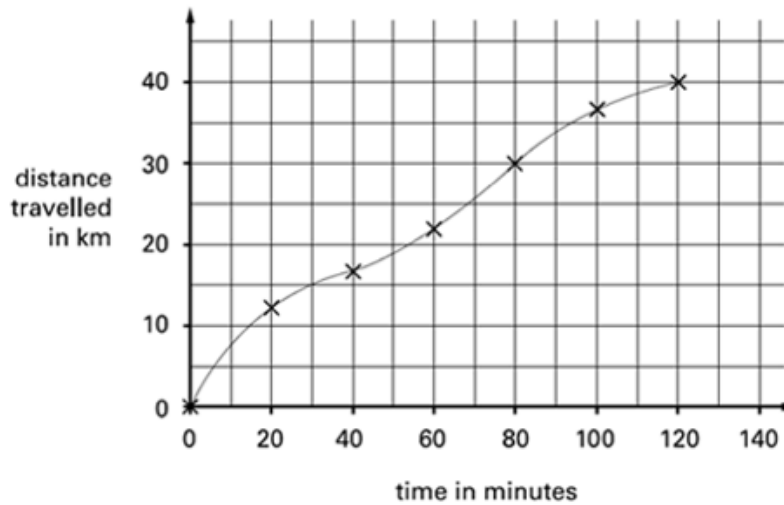
At what time will she arrive in Perth?



19

Carol went on a **40-kilometre** cycle ride.

This is a graph of how far she had gone at different times.



How many minutes did Carol take to travel the **last 10 kilometres** of the ride?



Use the graph to estimate the distance travelled in the **first 20 minutes** of the ride.



Carol says,

*'I travelled further in the first hour than in the second hour.'*

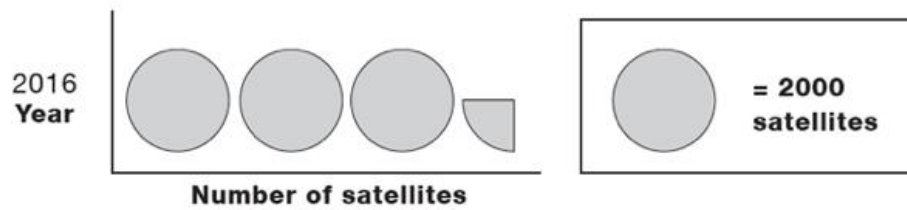
Explain how the graph shows this.



.....

13

The pictogram shows the number of satellites above Mars in 2016.



How many **satellites** were above Mars in 2016?

1 mark

8

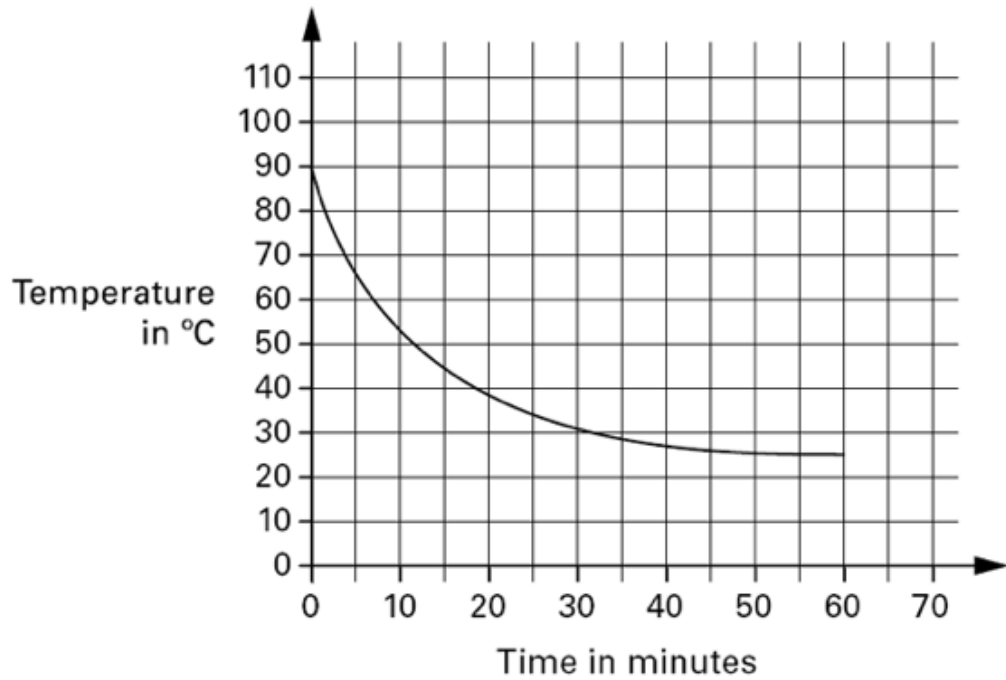
Here is part of the bus timetable from Nottingham to Canterbury.

<b>Nottingham</b>	10:05	10:13	10:28	10:44
<b>Peterborough</b>	10:14	10:22	10:36	10:53
<b>Cambridge</b>	10:27	10:35	10:52	11:09
<b>Chelmsford</b>	10:39	10:48	11:07	11:25
<b>Canterbury</b>	10:56	11:08	11:26	11:43

Mr. Willey is at Cambridge at 10:30. What is the **earliest time** he can reach Canterbury on the bus?

1 mark

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**



minutes

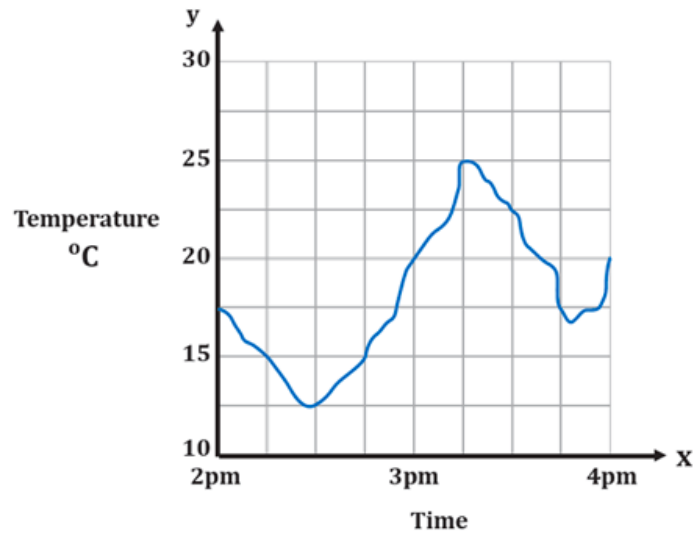
Read from the graph **how many minutes** the temperature is **above 60°C**



minutes

7

The graph below shows the temperature changes of a day in a hill station.



Estimate the **temperature** at 2.15 pm.

 °C

\_\_\_\_\_ 1 mark

Estimate the **time** when the temperature was highest.

 pm

\_\_\_\_\_ 1 mark

How much did the **temperature** change from 2 pm to 2.30 pm? Give your answer to the **nearest degree**?

 degrees

\_\_\_\_\_ 1 mark

**17**

Here is part of the morning bus timetable from Winton to Yansley.

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Dubley	10:23	10:43	11:03	11:23
Yansley	10:55	11:15	11:35	11:55

How many minutes does the bus take to get from Ingham to Dubley?




17a


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1 mark

Megan is in Carston.

She wants to be in Yansley before 11:30

What is the time of the latest bus she can take from Carston?




17b

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1 mark

One morning, the 10:35 bus from Winton gets to Carston  
3 minutes early.

What time does it get to Carston?




17c

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1 mark**Homework: to complete any questions remaining**