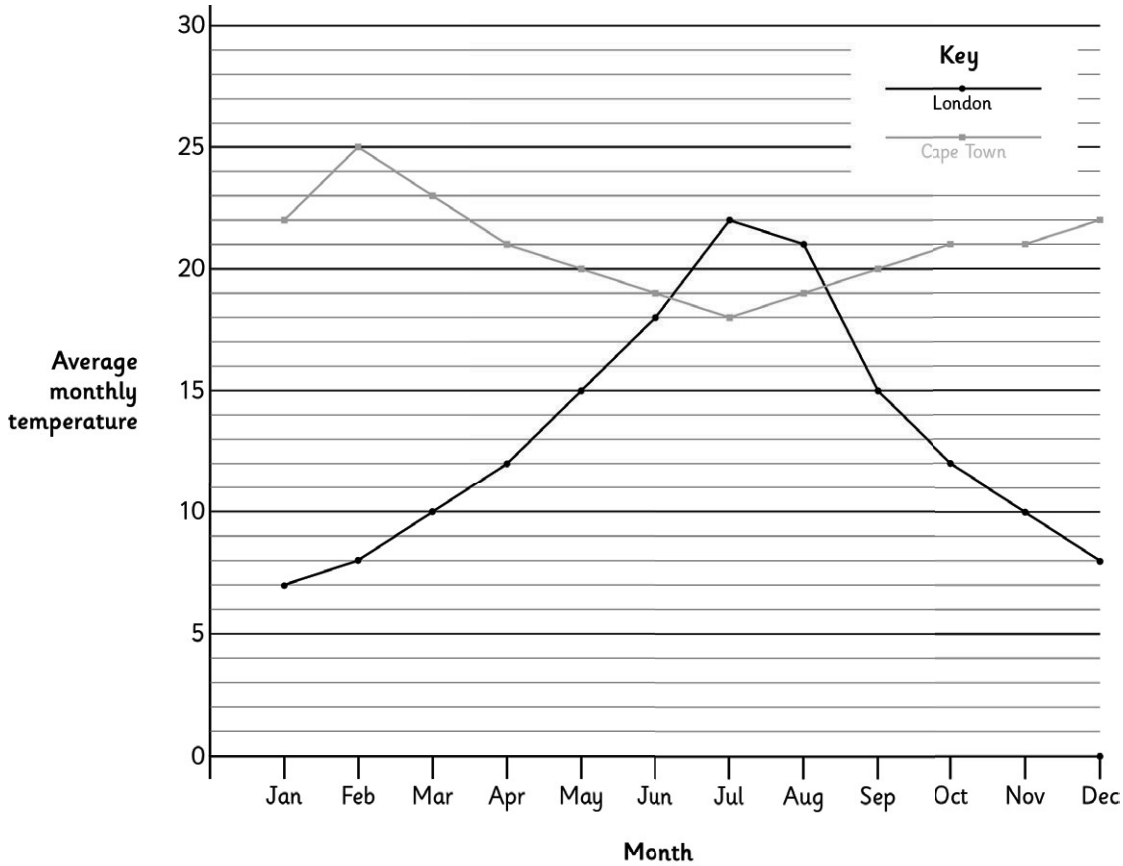


# Maths Assessment Year 6 Term 3: Statistics

1. Interpret and construct pie charts and line graphs and use these to solve problems.

a) Here is a graph showing the average monthly temperatures over a year in London, England and Cape Town, South Africa.



i) What is the average temperature in London in March?	
ii) What is the difference between the average monthly temperature in Cape Town and the average monthly temperature in London in November?	
iii) In which months is it warmer in London than in Cape Town?	
iv) In which month is the greatest difference between the average temperatures in London and Cape Town?	
v) In which month is the least difference between the average temperatures in London and Cape Town?	

vi) In which months is the average temperature in both London and Cape Town between (not including) 11°C and 22°C?

5 marks

2 marks

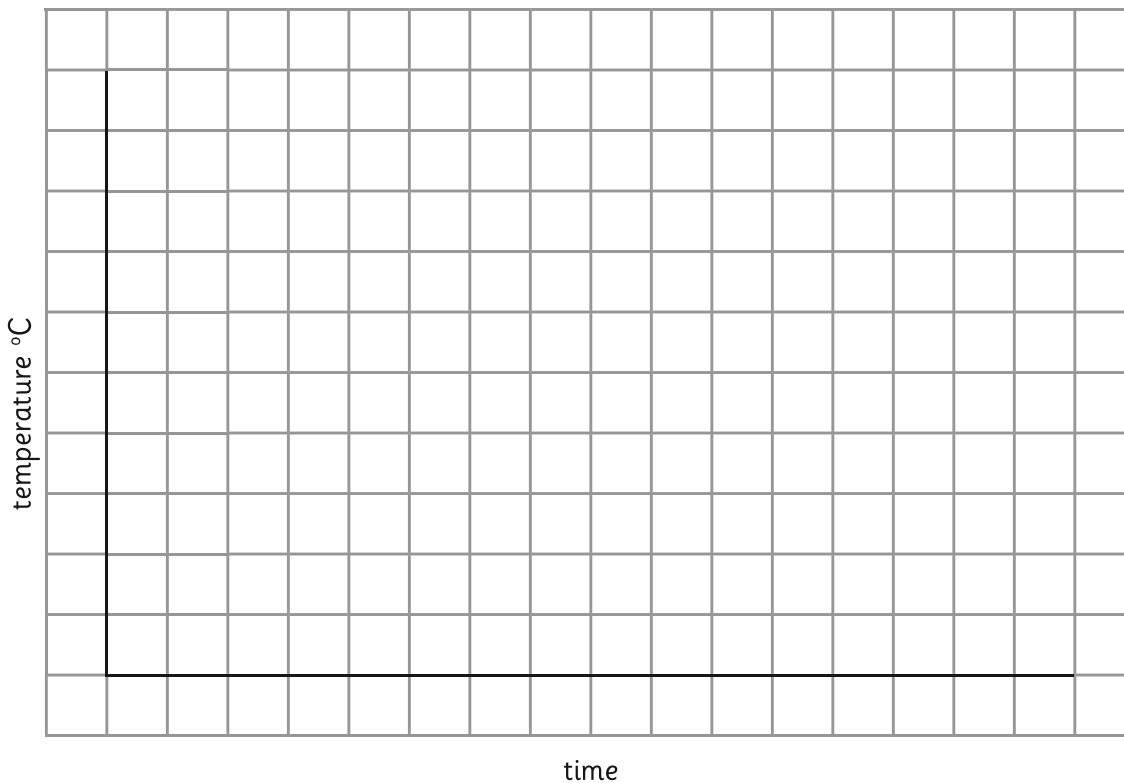
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b) A school monitors the temperature in the playground at each hour:

Time	Temperature °C
10:00	1
11:00	4
12:00	12
13:00	15
14:00	13
15:00	6
16:00	9
17:00	3

i. Plot a line graph showing the information in the table:

**A graph to show the temperature in the playground**



ii. Using the graph, estimate the temperature at 10:30.

iii. Between which hours is the greatest change in the temperature?

.....

.....



3 marks



1 mark



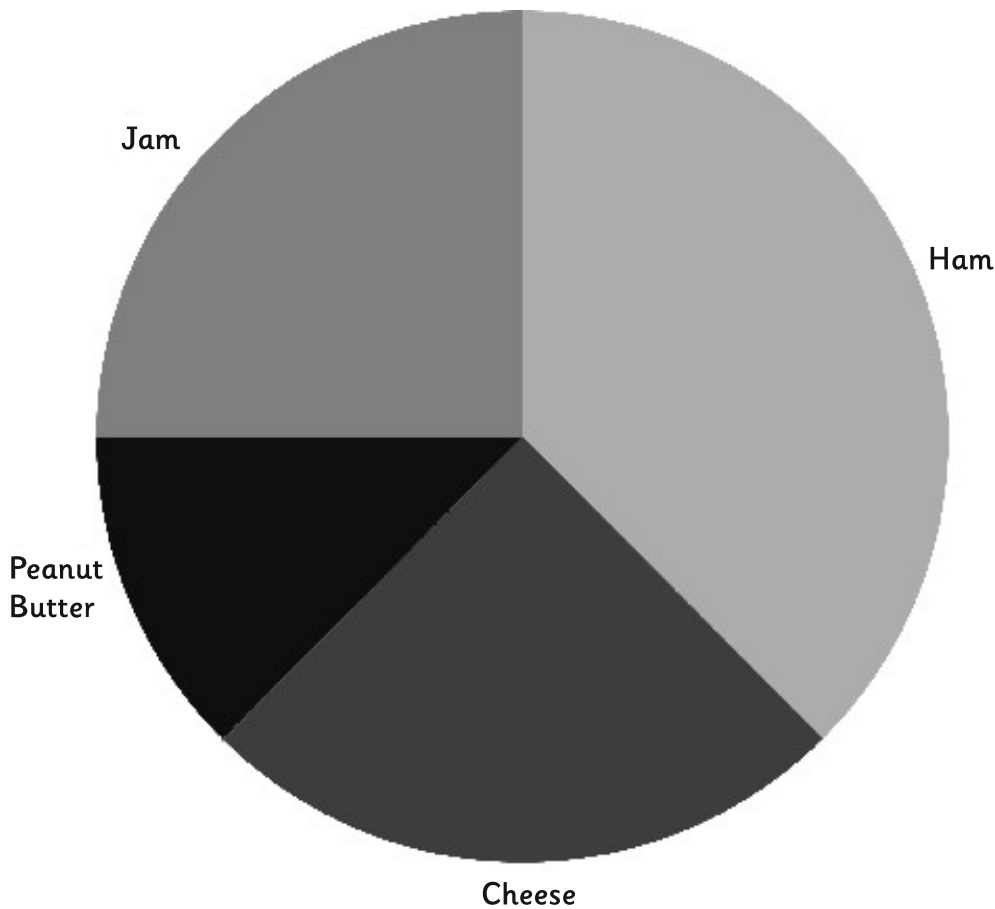
1 mark



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c) 32 children chose their favourite sandwich filling. Here is a pie chart to show their responses:

A pie chart to show people's favourite sandwich filling.



i) What percentage of children said their favourite sandwich filling was cheese?	
ii) How many children chose ham as their favourite sandwich filling?	
iii) How many more children chose jam than peanut butter as their favourite sandwich filling?	

iv) Peanut butter is removed from the choices. All the children who chose peanut butter choose cheese. What is the most popular sandwich filling now?

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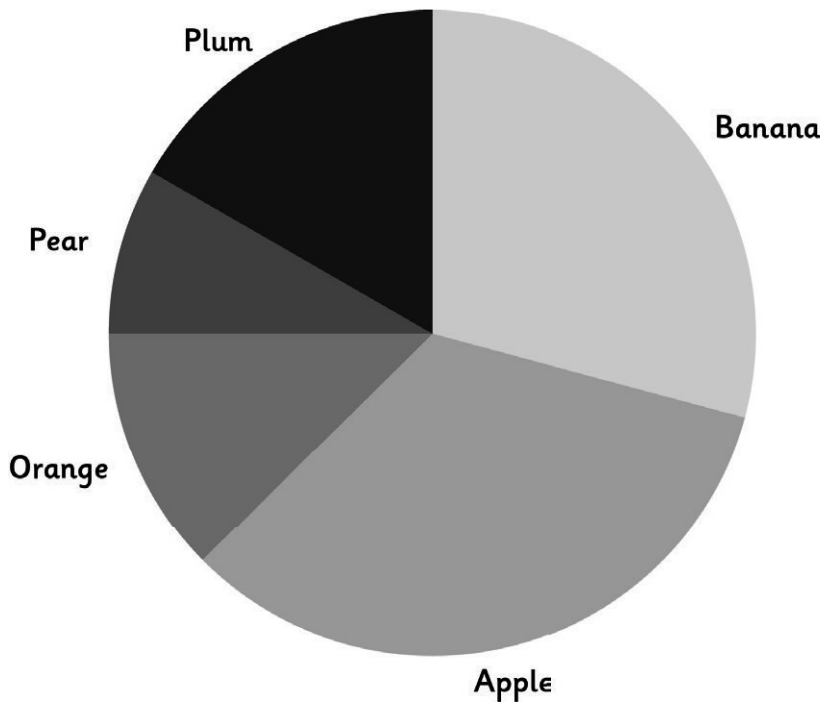
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3 marks

2 marks

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d) All the children in Key Stage 2 in a school are asked what was the last piece of fruit that they ate. The following pie chart is created from the information.



i. If 20 children ate a plum, estimate how many children ate a pear.



1 mark

ii. Estimate the percentage of children who ate an apple.



1 mark

iii. Which fruit was least popular?



1 mark

iv. Estimate the number of children who took part in the survey?



2 marks



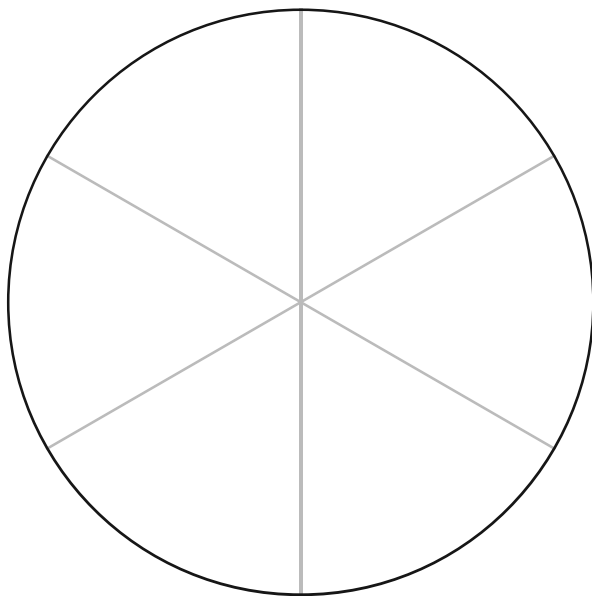
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e) Some children were asked whether they had any pets.

The following table shows the results.

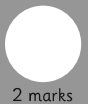
Pet	Number of children
Cat	8
Dog	8
Rabbit	3
Fish	2
Guinea Pig	3

i. Use the frame below to create a pie chart to show this information. Add colours to the pie chart and key to show what each section represents.



Key	
<input type="checkbox"/>	Cat
<input type="checkbox"/>	Dog
<input type="checkbox"/>	Rabbit
<input type="checkbox"/>	Fish
<input type="checkbox"/>	Guinea Pig

ii. Which pet or pets did 12.5% of children have?



2 marks



1 mark



Total for this page

2. Calculate and interpret the mean as an average.

A class of children count the number of vehicles that go past the school each hour during a school day.

Time	Number of vehicles
09:00 – 10:00	21
10:00 – 11:00	15
11:00 – 12:00	13
12:00 – 13:00	9
13:00 – 14:00	12
14:00 – 15:00	14

a) Calculate the mean number of cars passing the school each hour.

The grid is 20 columns wide and 15 rows high. A small rectangular box is drawn in the bottom right corner, spanning approximately 5 columns and 2 rows.

1 mark

Total for this page



