8 MySummary

Check out

You should now be able to ...		Test it ➡ Questions
✓ Organise data into frequency tables.	6	1 – 2
✓ Interpret statistical diagrams.	6	3
✓ Plot and analyse time-series graphs.	6	4
✓ Estimate averages from grouped tables.	6	5 – 6
✓ Make comparisons between sets of data.	6	7

Language	Meaning	Example
Categorical data	Data that can be described in words and may not have any numerical values.	Hair colour and gender are examples of categorical data.
Discrete data	Data that can only take certain values.	Number of people in a classroom and shoe size are examples of discrete data.
Continuous data	Data that can take any value in a range.	Height and weight are examples of continuous data.
Average	One number that represents a set of numbers.	Mean, median and mode are different types of averages.
Correlation	A relationship between two variables, such as number of ice creams sold and temperature.	There is a positive correlation between the number of ice creams sold and the temperature. As the temperature increases, so does the number of ice creams sold.
Mean	An average value found by adding the data and dividing by the number of data items.	9, 9, 9, 15, 2, 3, 5 This mean is: $\frac{9+9+9+15+2+3+5}{7} = \frac{49}{7} = 7$
Median	The middle value in order of size.	2, 3, 5, 9, 9, 9, 15 The median is 9.
Mode	The value that occurs most often	The mode is 9.
Range	The difference between the largest and smallest data values.	15 – 2 = 13 The range is 13.

8 MyReview

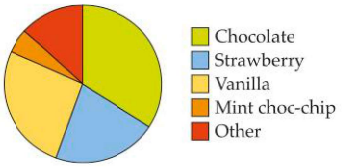
1 Phil is going to record how many of each type of bird he sees in the morning, afternoon and evening. The birds he thinks he will see are chaffinch, sparrow, starling and wood pigeon. Design a data-collection sheet for him to use.

2 The weights of 3 month old babies were recorded (kg).

5.8	5.7	4.9	6.1	6.7	5.4
5.0	4.5	6.2	6.2	7.2	7.4
6.8	4.9	5.5	5.8		

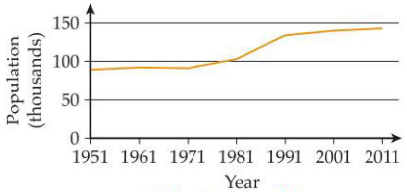
Construct a frequency table for this data.

3 The pie chart shows the flavours of ice cream sold.



38 people were asked in total.
How many preferred each flavour?

4 The graph shows the approximate population of a town over 60 years.



4 **a** Describe the trend.
b A large factory employing thousands of people opened in the town. In which ten-year period do you think this happened?

5 The table shows the class sizes in a school.

Size	26	27	28	29	30
Frequency	1	2	1	2	6

Find
a the mode **b** the mean (to 1 dp)
c the median **d** the range.

6 A group of students recorded how many pieces of homework they were set in a week.

Homework	0–4	5–9	10–14	15–19
Frequency	2	12	13	6

a Estimate the range.
b Find the modal class.
c Estimate the mean (1 dp).
d Estimate the median.

7 The score of boys and girls in a spelling test was recorded.

Score	0	1	2	3	4	5
Boys	1	4	7	8	3	2
Girls	0	2	13	8	1	1

a Draw frequency diagrams on the same axes for the boys and the girls.
b Compare these sets of data.

What next?

Score	
0 – 3	Your knowledge of this topic is still developing. To improve look at Formative test: 3B-8; MyMaths: 1192, 1196, 1201, 1202, 1205, 1207, 1213, 1215, 1248, 1249, 1254, 1936 and 1939
4, 5	You are gaining a secure knowledge of this topic. To improve look at InvisiPen: 411, 413, 414, 421 – 424, 426, 427, 441 – 444, 446 – 448
6, 7	You have mastered this topic. Well done, you are ready to progress!