

Averages and Range

ANSWERS

Calculator | 30 minutes | Total marks: 26

Name Class

1

Here are nine numbers.

7 3 9 3 8 6 3 9 6

(a) Write down the mode.

Answer 3 (1) [1 mark]

(b) Work out the median.

3, 3, 3, 6, 6, 7, 8, 9, 9 (1)

Answer 6 (1) [2 marks]

(c) Work out the mean.

$54 \div 9$ (1)

Answer 6 (1) [2 marks]

(d) Work out the range.

Answer 6 (1) [1 mark]

2

The table shows the number of siblings of each of 25 students.

Number of siblings	0	1	2	3	4
Frequency	4	9	7	3	2

(a) Write down the mode.

Answer 1 (1)

[1 mark]

(b) Work out the median.

the 13th value, and $4 + 9 = 13$ (1)

Answer 1 (1)

[2 marks]

(c) Work out the mean.

$$0 + 9 + 14 + 9 + 8 = 40 \text{ (1)}$$

$$40 \div 25 \text{ (1)}$$

Answer 1.6 (1)

[3 marks]

3

The table shows the times that 28 students take to travel to school.

Time, t (minutes)	Frequency
$0 < t \leq 10$	5
$10 < t \leq 20$	12
$20 < t \leq 30$	8
$30 < t \leq 40$	3

(a) Write down the modal class.

Answer $10 < t \leq 20$ (1)

[1 mark]

(b) Which class contains the median?

between the 14th and 15th values, and $5 + 12 = 17$ (1)

Answer $10 < t \leq 20$ (1)

[2 marks]

4

Here are the salaries of the five people who work in a small company.

£18 000 £20 000 £21 000 £22 000 £95 000

Which average, the mean or the median, best represents these salaries?

Give a reason for your answer.

The median (1)

The mean is pulled up by the one very large salary (1)

[2 marks]

5

The table shows the mean and the range of the points scored by two quiz teams.

	Mean	Range
Team A	12	3
Team B	10	9

Compare the points scored by the two teams.

Team A scored more on average, its mean is higher (1)

Team A is more consistent, its range is smaller (1)

[2 marks]

6

The mean of five numbers is 8

Four of the numbers are 6, 9, 7 and 10

Work out the fifth number.

$$5 \times 8 = 40 \text{ (1)}$$

$$6 + 9 + 7 + 10 = 32 \text{ (1)}$$

Answer 8 (1)

[3 marks]

7

The mean of four numbers is 7

A fifth number, 12, is added to the list.

Work out the mean of the five numbers.

$$4 \times 7 = 28 \text{ (1)}$$

$$28 + 12 = 40, \text{ then } 40 \div 5 \text{ (1)}$$

Answer 8 (1)

[3 marks]

8

The smallest number in a list is 4

The range of the list is 11

Write down the largest number in the list.

Answer 15 (1)

[1 mark]

Question	Topic	RAG
1	I can find the mode, median, mean and range of a list	
2	I can find averages from a frequency table	
3	I can find the modal class and the class containing the median	
4	I can choose the most suitable average	
5	I can compare two sets of data	
6	I can use the mean to find a missing value	
7	I can work out a new mean	
8	I can use the range to find a value	