Name	Date

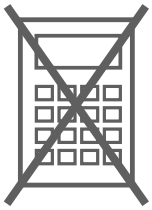
GCSE Mathematics 9-1

Averages: Mean, Median, Mode and Range

(Non-Calculator)

Exam-Style Topic Paper	Total Marks
Time: 1 hour 2 minutes	**/ 55**

Instructions



- Use black ink or ball-point pen.
- Fill in the boxes at the top of this page with your name and date number.
- Answer all questions.
- Answer the questions in the spaces provided – there may be more space than you need.
- You must show all your working.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- Calculators may **not** be used.

Information

- The marks for each question are shown in brackets – use this as a guide as to how much time to spend on each question.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

1 Here are eight numbers:

8 12 14 8 10 11 14 8

(a) Write down the mode of these numbers

.....

[1 mark]

(b) Write down the median of these numbers

.....

[1 mark]

(c) Write down the range of these numbers

.....

[1 mark]

(d) Write down the mean of these numbers

.....

[2 marks]

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2 Here are seven numbers:

5 12 7 10 8 6 15

(a) Write down the mode of these numbers

.....

[1 mark]

(b) Write down the median of these numbers

.....

[1 mark]

(c) Write down the range of these numbers

.....

[1 mark]

(d) Write down the mean of these numbers

.....

[2 marks]

---

3 Here are the marks of six students in a test

12 18 14 16 10 20

(a) Write down the mode of their marks

.....

[1 mark]

(b) Write down the median of their marks

.....

[1 mark]

(c) Write down the range of their marks

.....

[1 mark]

(d) Write down the mean of their marks

.....

[2 marks]

---

4 The shoe sizes of eight children are

3 4 5 3 6 5 4 3

(a) Write down the mode of their sizes

.....

[1 mark]

(b) Write down the median of their sizes

.....

[1 mark]

(c) Write down the range of their sizes

.....

[1 mark]

(d) Write down the mean of their sizes

.....

[2 marks]

---

5 The times in minutes taken by five people to run a race are:

12 14 11 13 17

(a) Write down the mode of the times

.....

[1 mark]

(b) Write down the median of the times

.....

[1 mark]

(c) Write down the range of the times

.....

[1 mark]

(d) Write down the mean of the times

.....

[2 marks]

---

6 Sarukan recorded the number of books he read each month:

4 2 3 6 5 1

(a) Write down the mode

.....

[1 mark]

(b) Write down the median

.....

[1 mark]

(c) Write down the range

.....

[1 mark]

(d) Write down the mean

.....

[2 marks]

---

7 The table shows the number of pets in eight households

Pets	Frequency
0	1
1	3
2	2
3	1
4	1

(a) Write down the mode of the number of pets

.....

[1 mark]

(b) Write down the median of the number of pets

.....

[1 mark]

(c) Write down the range of the number of pets

.....

[1 mark]

(d) Work out the mean number of pets

.....

[2 marks]

8 The mean of six numbers is 8
Five of the numbers are known

7 9 6 12 10 x

(a) Find the sixth number, x

.....

[3 marks]

(b) Write down the median of the numbers

.....

[1 mark]

(c) Write down the range of the numbers

.....

[1 mark]

(d) Write down the mode of the numbers

.....

[1 mark]

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9 The median of nine numbers is 15
The numbers in order are:

8 10 12 14 15 17 19 20 21

(a) Write down the mode of these numbers

.....

[1 mark]

(b) Write down the range of these numbers

.....

[1 mark]

---

10 A class of 20 students sat a test. There are 10 boys and 10 girls.
The mean mark was 60.
The total of the boys' marks was 640.
The total of the girls' marks was 560.
Work out the mean mark for the boys and the girls

Boys .....

Girls .....

[2 marks]

---

11 A set of 5 numbers has a mean of 20.
If one of the numbers is increased by 10, what will the new mean be?

.....

[3 marks]

---

12 A teacher records the shoe sizes of students:

Shoe Size	5	6	7	8	9
Frequency	2	6	10	5	2

(a) Work out the mean shoe size

.....

[1 mark]

(b) Find the modal shoe size

.....

[1 mark]

---

13 The mean of 12 numbers is 15.
One number is removed, and the new mean is 14.
Work out the number that was removed.

.....

[2 marks]

14 The marks of 17 students are grouped as follows:

Marks (m)	**Frequency**
$0 \leq m < 10$	2
$10 \leq m < 20$	5
$20 \leq m < 30$	10

Estimate the mean mark

.....

[3 marks]