

Name:

Date:

Mean, Median, Mode and Range

GCSE

Edexcel
Mathematics
Grade (9-1)

Mark

Score (%)

<hr/> 80	
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Materials

For this paper you must have:

- Ruler
- Pencil, Rubber, Protractor and Compass
- Scientific calculator, which you are expected to use when appropriate

Instructions

- Answer all questions
- Answer questions in the space provided
- All working must be shown
- Do all rough work in this book. Cross out any rough work you don't want to be marked

Information

- The marks for the questions are shown in brackets

1 Dean rolled a 6-sided dice 5 times.

Here are his scores.

3 2 6 5 4

(a) Work out the median of his scores.

.....
(2)

(b) Work out the mean of his scores.

.....
(2)

(c) Work out the range of his scores.

.....
(2)

(Total for question 1 is 6 marks)

2 Here are the ages of 9 children at a birthday party.

9 10 12 13 10 11 14 10 12

(a) Find the mode.

.....
(1)

(b) Find out the median.

.....
(2)

(c) Work out the range.

.....
(2)

(d) Work out the mean.

.....
(2)

(Total for question 2 is 7 marks)

3 The ages of 5 people at a dentist's office are given below:

12 69 72 13 45

(a) What is the range of ages?

.....
(1)

(b) What is median age?

.....
(2)

(c) Work out the mean age.

.....
(2)

(d) Does a mode exist in this case?

.....
(1)

(Total for question 3 is 6 marks)

4 Fifty students were asked how many books they each took to school on Monday.

The results are summarized in the table below.

Number of books	0	1	2	3	4	5	6	7
Frequency	10	11	8	3	6	7	4	1

(i) Write down the median.

.....
(1)

(ii) Calculate the mean number of books.

.....
(3)

(Total for question 4 is 4 marks)

5 The temperature in degrees Celcius at midnight on 12 consecutive days were:

-1, 0, -4, 1, 2, -2, -1, -3, 1, 2, 3, 2

(a) Find the mode of these temperatures.

.....
(1)

(b) Find the median of these temperatures.

.....
(2)

(Total for question 5 is 3 marks)

6 Sana's class has 5 boys and 4 girls

Their scores in one exam are given below

Boys: 57 98 85 77 82

Girls: 85 64 99 53

(a) Work out the mean of the boys' scores.

.....
(2)

(b) Work out the median of the girls' scores.

.....
(2)

(c) What is the difference in the range of girls' score and boys' score?

.....
(3)

(Total for question 6 is 7 marks)

7 The mean of 13 numbers is 25

A 14th number with the value of 30 is added to the list.

(a) Will the mean increase, decrease or remain the same?

.....
(2)

(b) Explain your answer in (a).

.....
.....
.....
(2)

(Total for question 7 is 4 marks)

8 Ali records the number of minutes it takes him to get to school over 7 days.

8 5 13 6 24 19 10

Find the median

.....
(Total for question 8 is 2 marks)

9 The number of goals mark scored in 10 football matches are given below:

5 3 0 1 1 2 7 3 3 0

(a) What is the median number of goals he scored?

.....

(2)

(b) What is the mode in number of goals?

.....

(1)

(Total for question 9 is 3 marks)

10 Ginny spent an average of 35 minutes watching TV from Monday to Saturday. On Sunday, Ginny spent y minutes watching TV. The average for the complete week is 40 minutes. Find the value of y .

.....

(Total for question 10 is 3 marks)

Leave
blank

11 The mean of 2 numbers is 36.
Another number is added and the mean becomes 45.
What is the third number?

.....
(Total for question 11 is 3 marks)

12 The mean of 7 numbers is 35.
The mean of 3 of the numbers is 40
What is the mean of the remaining 4 numbers?

.....
(Total for question 12 is 3 marks)

13 Here are 20 numbers:

1 3 5 5 7
7 7 7 10 11
13 15 20 22 22
23 23 25 28 70

(a) Find the mode

.....
(2)

(b) Find the median

.....
(2)

(c) Work out the range.

.....
(2)

(Total for question 13 is 6 marks)

14 Dai played three games of cricket.

His mean score was 9 runs.

His median score was 8 runs.

His highest score was 7 runs more than his lowest score.

(a) Find the number of runs he scored in each of the three games.

..... , ,
(3)

Dai batted in a fourth game. The mean of his four scores was 11 runs.

(b) Find the number of runs that Dai scored in the fourth game.

.....
(2)

(Total for question 14 is 5 marks)

15 Mahad loves to collect old coins.

The number of coins he collected every year from 2013 to 2017 is given below:

Year	2013	2014	2015	2016	2017
Coins	13	45	21	x	76

(a) Write an expression for the mean number of coins Mahad collected from 2013 to 2017.

.....
(2)

Mahad collected a mean number of 55 coins in the 5 years

(b) Work out the value of x .

.....
(2)

(c) What is the median number of coins Mahad collected?

.....
(2)

(Total for question 15 is 6 marks)



Leave
blank

- 16** John's grandfather is 69 years old.
John's father is 22 years younger than John's grandfather.
John is x years younger than his father.
The mean of their ages is 44 years.
Find the value of x .

.....
(Total for question 16 is 4 marks)

- 17** The number of people on a daily flight from New York to Connecticut over 5 days is recorded below:

67 54 98 57 75

What is the difference between the median and the range?

.....
(Total for question 17 is 3 marks)

Leave
blank

- 18** A set of 7 numbers has a median of 7.
All the numbers are odd
The mode of the numbers is 7.
The range of the numbers is 20.
What can be a possible set of these 7 numbers?

..... , , , , , ,

(Total for question 18 is 3 marks)

- 19** The mean of 4 numbers is 12.
The mean of 3 of the numbers is 10
What is the fourth number?

.....

(Total for question 19 is 2 marks)

Leave
blank

20 The mean of 3 numbers is the same as the median.
The range of the numbers is also the same as the median.
The largest of the numbers is 9.
What are the other 2 numbers?

.....
(Total for question 20 is 4 marks)