

Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Averages 2

Calculator Allowed

INSTRUCTIONS TO CANDIDATES

Write your name in the space provided.

Write your answers in the spaces provided in this question paper.

Answer ALL questions.

Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

Total Marks :

- 1) The number of books in the bags of a class were recorded.

Number of Books	Frequency
0	2
1	6
2	7
3	6
4	4
5	5

- (a) Write down the modal number of books.

Answer _____ [1]

- (b) How many pupils were in the class?

Answer _____ [1]

- 2) The ages of 10 people leaving a chemist shop were recorded

23 57 61 28 33 48 19 48 35 12

- (a) Calculate the mean age.

Answer _____ [3]

- (b) Find the median age.

Answer _____ [2]

- 3) Ten students have part time jobs at the weekend. Their earnings are

£20	£33	£19	£22	£31
£36	£28	£25	£27	£34

Calculate the mean amount of money earned by the students.

Answer £_____ [3]

- 4) The 10 boys in Class 12A gained the following marks in a test:

18, 12, 15, 9, 13, 14, 20, 11, 10, 8

The 8 girls in Class 12A gained a total of 128 marks.

Which group did better, boys or girls? Give a reason for your answer.

Answer _____

because _____

_____ [4]

5) The ages of 15 pupils in a primary school play are

5, 6, 8, 9, 7, 8, 5, 9, 5, 8, 7, 6, 7, 9, 8

(a) What age is the mode?

Answer _____ [1]

(b) What is the median age?

Answer _____ [2]

6) The ages of nine women in a Health Club were recorded

23 45 34 18 27 32 20 24 38

(a) Calculate the range of the ages.

Answer _____ [1]

(b) Calculate the mean age.

Answer _____ [3]

- 7) Fifteen people entered a fishing competition. The number of fish caught by each was recorded as follows:

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	0	2	5	1	1	3	3	0	5	2	6	1	6	3

- (a) Write down the modal number of fish caught.

Answer _____ [1]

- (b) Write down the range of the numbers of fish caught.

Answer _____ [1]

- 8) Find the median of the following numbers

13 4 5 21 24 18 2 9 5 15 3 11 16 23 8 20

Answer _____ [2]

- 9) (a) The ages of some footballers are

25 15 27 18 24 17 21 18 18 17

What is the mean age of the footballers?

Answer _____ [3]

- (b) Paige's revision homework is always marked out of 10.
 Her last 3 marks for her homework have a median of 7, a range of 4 and a mode of 7.
 Complete the boxes below to show the last 3 marks that Paige had for her revision homework. [3]

Working:

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- 10) Write down five numbers that satisfy all of the following conditions:

- They are all between 1 and 9 inclusive.
- They have a median value of 6.
- They have a range of 7.
- Their mean is 5.

[3]

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11)

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Five **single digit numbers** need to be written on the cards above.

The median, mode, mean and range of the numbers must all be 5.

Write a possible set of **single digit numbers** on the cards, in ascending order.

[4]

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12)

In a game, it is possible for **each** player to score between 1 and 10 points.
Lois and Beca play the game five times.

The table below shows the points scored by Lois in each game.

	Game 1	Game 2	Game 3	Game 4	Game 5
Lois	5	2	8	5	1
Beca					

Beca had a higher mean score than Lois.
Beca had a lower median score than Lois.
Beca had a lower range of scores than Lois.

Complete the table above with a set of possible scores gained by Beca.

[3]

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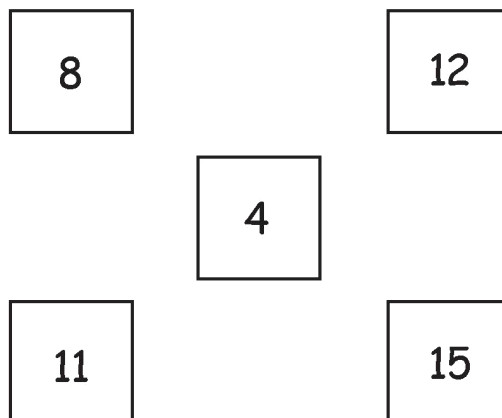
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13)

Matthew is playing a game that uses numbered tiles.

The game involves working out the range and mean of the numbers on five tiles.

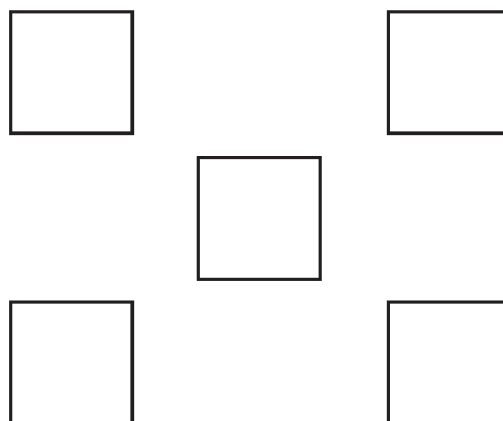
Matthew has these five tiles.



With his final move in a game, Matthew must replace **exactly two** of his tiles with two different tiles.

To win the game he must keep the **same range** as above but **increase the mean by 1**.

Fill in the numbers on the tiles below to show the three tiles he has kept, and the new numbers on the two tiles he has changed, if he is to win.



For working:

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[3]