

Averages Problems

For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **30**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

- 1** Four numbers have a mean of 9
Three of the numbers are equal.
The other number is 18
Work out the value of each of the three equal numbers.

[3 marks]

Answer _____

- 2** The mean of three numbers is 8
The mean of two other numbers is 13
Work out the mean of all five numbers.

[3 marks]

Answer _____

- 3** A class has 12 boys and 18 girls.
The mean test score of the boys is 64
The mean test score of the girls is 70
Work out the mean test score of the whole class.

[3 marks]

Answer _____

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

£18 000 £19 000 £20 000 £21 000 £120 000

- (a) Which average would best represent a typical salary?
Circle your answer.

[1 mark]

mean

median

mode

- (b) Give a reason why the mean is not a good average to use.

[1 mark]

- 5** Each number in a list is increased by 5
Tick **one** box for each statement.

[3 marks]

	True	False	Cannot tell
The mean is increased by 5	☐	☐	☐
The range is increased by 5	☐	☐	☐
The median is now greater than the mean	☐	☐	☐

- 6** Four positive whole numbers have
a mode of 3
a median of 4
a mean of 5
Work out the four numbers.

[3 marks]

Answer _____

- 7 Here are four cards.

4	7	9	12
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Another card is added.

The mean of the numbers on the five cards is 1 more than the mean of the numbers on the four cards.

Work out the number on the new card.

You must show your working.

[3 marks]

Answer _____

- 8 Tom has six cards. Each card has a number on it.
The numbers on four of the cards are 9 4 12 5

For the six numbers

the mode is 4

the mean is 7

Work out the numbers on the other two cards.

[3 marks]

Answer _____ and _____

- 9 The mean of these four expressions is 7

$$x \quad x + 3 \quad 2x \quad 2x + 1$$

Work out the value of x .

[3 marks]

Answer $x =$ _____

- 10 Priya has done four science tests. Each test was out of 40 marks.
Her mean percentage for the four tests is 60%
She wants her mean percentage for five tests to be 64%
Work out the mark, out of 40, that Priya needs in the fifth test.

[4 marks]

Answer _____ out of 40