

Averages Problems

For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **30**

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

- 1** Sienna writes down four whole numbers.
The mode of the four numbers is 6
The mean of the four numbers is 7
Two of the numbers are 6 and 9
Work out the other two numbers.

.....
(2)
(Total for Question 1 is 2 marks)

- 2** There are 10 players in the Red team.
Their mean score in a quiz is 18
The players in the Blue team have a mean score of 13
The mean score of all the players in both teams is 15
Work out the number of players in the Blue team.

.....
(3)
(Total for Question 2 is 3 marks)

- 3** Priya has three cards. Each card has a number on it.
The mean of the three numbers is 7
The median is 5
The range is 8
Work out the three numbers.

.....
(3)

(Total for Question 3 is 3 marks)

- 4** Jen runs a shoe shop.
She wants to know which shoe size to order most of.
(a) Write down which average Jen should use.

.....
(1)

- (b) Give a reason for your answer.

.....
.....
(1)

(Total for Question 4 is 2 marks)

- 5 Bill's mean score for 4 games of darts is 45
After his fifth game, his mean score is 48
Work out Bill's score in his fifth game.

.....
(3)

(Total for Question 5 is 3 marks)

- 6 The mean time of 6 runners in a race is 52 seconds.
One of the times was recorded as 48 seconds by mistake.
It should have been 60 seconds.

(a) Work out the correct mean time for the 6 runners.

..... seconds
(3)

- (b) Another runner's time of 54 seconds is added to the results.
What effect does this have on the correct mean time?
Give a reason for your answer.

.....
.....
(1)

(Total for Question 6 is 4 marks)

- 7 Leo buys 4 bags of rice with a mean weight of 2.5 kg.
He also buys 6 bags of flour with a mean weight of 1.5 kg.

Leo says,

“The mean weight of all 10 bags is 2 kg, because 2 is halfway between 2.5 and 1.5”

Is Leo correct?

You must show how you get your answer.

(3)

(Total for Question 7 is 3 marks)

- 8 The mean of a , b and c is 10
The mean of a , b , c , d and e is 12
Work out the mean of d and e .

.....
(3)

(Total for Question 8 is 3 marks)

- 9 There are 12 apples in a bag.
The mean mass of the 12 apples is 150 g.
4 apples are taken out of the bag.
The mean mass of the 8 apples left in the bag is 145 g.
Work out the mean mass of the 4 apples that were taken out.

..... g
(3)

(Total for Question 9 is 3 marks)

- 10 A chess club has 18 members.
The mean age of the 18 members is 24 years.
Two members, aged 19 and 24, leave the club.
Three new members join the club.
The mean age of the 19 members is now 26 years.
Work out the mean age of the three new members.

..... years
(4)

(Total for Question 10 is 4 marks)
