

S054 Averages and range

Q1.

Here are the ages, in years, of 10 children.

4 9 6 7 3 5 2 6 4 6

(a) Find the mode.

..... years

(1)

(b) Work out the median.

..... years

(2)

(c) Work out the range.

..... years

(2)

(Total for question = 5 marks)

Q2.

Here is the number of goals a hockey team scored in each of 10 matches.

3 4 3 2 5 3 5 6 2 4

Find

(i) the median

.....

(ii) the range

.....

(iii) the mean

.....

(Total for Question is 6 marks)

Q3.

Mrs Smith asked each student in her class to record the numbers of times they used their mobile phone last Saturday.

Here are the results for the boys.

Boys 8 10 8 9 7 9 8 13 14

(a) Work out the median.

.....
(2)

Here are the results for the girls.

Girls 6 8 9 9 10 14 14

*(b) Compare the numbers of times the boys used their mobile phones with the numbers of times the girls used their mobile phones.

(4)

(Total for question = 6 marks)

Q4.

Here are the heights, in metres, that 10 men jumped in a high jump competition.

2.19 2.23 2.23 2.23 2.26 2.28 2.29 2.29 2.31 2.33

(a) For these heights, find

(i) the mode,

..... m

(ii) the mean,

..... m

(iii) the range.

..... m

(4)

In a high jump competition for women, the heights, in metres, that 10 women jumped were recorded.

For these heights

the mean was 1.95 m

the range was 0.18 m

(b) Compare the heights that the men jumped with the heights that the women jumped.

.....
.....
.....
.....
.....
.....
.....

(2)

(Total for Question is 6 marks)

Q5.

The list shows the number of goals scored by Kevin's hockey team in each of 8 matches.

2 1 7 2 12 6 2 4

(a) Find the mode.

..... (1)

(b) Work out the range.

..... (2)

In the 9th match, Kevin's hockey team scored 5 goals.

(c) Work out the median number of goals scored in the 9 matches.

..... (2)

(Total for Question is 5 marks)

Q6.

Here is the number of goals scored by a football team in each of its first 10 games.

3 1 4 2 0 1 1 1 3 2

(a) Write down the mode.

.....
(1)

(b) Work out the mean number of goals for the first 10 games.

.....
(2)

In the 11th game the team scored 4 goals.
In the 12th game the team scored 2 goals.

*(c) Will the mean number of goals for the 12 games be greater than or less than the mean number of goals for the first 10 games?
You must explain your answer.

(2)

(Total for Question is 5 marks)

Q7.

Seven people entered a singing competition.

Here are the number of points that each of the first six people scored.

10 8 5 13 18 15

(a) Work out the range for these six people.

.....
(2)

(b) Work out the median for these six people.

.....
(2)

The mean for the **seven** people was 12

(c) Work out how many points the seventh person scored.

.....
(2)

(Total for Question is 6 marks)

Q8.

The table gives information about the time it took each of 80 children to do a jigsaw puzzle.

	Number of children	Mean time (minutes)
Boys	32	32.4
Girls	48	28.4

Work out the mean time for all 80 children.

..... minutes

(Total for Question is 3 marks)

Q9.

4 red bricks have a mean weight of 5 kg.
5 blue bricks have a mean weight of 9 kg.
1 green brick has a weight of 6 kg.

Donna says,

"The mean weight of the 10 bricks is less than 7 kg."

Is Donna correct?

You must show how you get your answer.

(Total for question = 3 marks)

Q10.

There are 15 children at a birthday party.
The mean age of the 15 children is 7 years.

9 of the 15 children are boys.
The mean age of the boys is 5 years.

Work out the mean age of the girls.

..... years

(Total for question = 3 marks)

Q11.

Walkden Reds is a basketball team.

At the end of 11 games, their mean score was 33 points per game.
At the end of 10 games, their mean score was 2 points higher.

Jordan says,

"Walkden Reds must have scored 13 points in their 11th game."

Is Jordan right?

You must show how you get your answer.

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

Q12.

20 men, 10 women and 10 children are in a competition.

The mean score for the women is 15.6

The mean score for the children is 9.2

Kevin says that the mean score for all 40 people is 11.2

(a) Work out the mean score for the men.

.....

(3)

Kevin was wrong.

The mean score for all 40 people was actually 11.15

(b) How does this affect the mean score for the men?

.....

.....

(1)

(Total for question = 4 marks)

Q13.

Mr Brown gives his class a test.

The 10 girls in the class get a mean mark of 70%

The 15 boys in the class get a mean mark of 80%

Nick says that because the mean of 70 and 80 is 75 then the mean mark for the whole class in the test is 75%

Nick is not correct.

Is the correct mean mark less than or greater than 75%?

You must justify your answer.

.....

.....

.....

(Total for question = 2 marks)