



CLASS NOTES-ANSWERS

EXERCISE 3.2

1. The scores in mathematics test (out of 25) of 15 students is as follows:

19, 25, 23, 20, 9, 20, 15, 10, 5, 16, 25, 20, 24, 12, 20

Find the mode and median of this data. Are they same?

Answer:

Scores of 15 students in mathematics test are:

19, 25, 23, 20, 9, 20, 15, 10, 5, 16, 25, 20, 24, 12, 20.

Arranging scores in ascending order,

5, 9, 10, 12, 15, 16, 19, 20, 20, 20, 20, 23, 24, 25, 25

Mode = observation which occurs for the most number of times.

Therefore, 20 occurs most of the time.

∴ Mode = 20.

Median = middle of observation (in this case, 8th observation)

∴ Median = 20

Yes, mode and median of the given observations are same.

2. The runs scored in a cricket match by 11 players is as follows:

6, 15, 120, 50, 100, 80, 10, 15, 8, 10, 15

Find the mean, mode and median of this data. Are the three same?

Answer:

Total number of players = 11

Scores of players = 6, 15, 120, 50, 100, 80, 10, 15, 8, 10, 15

Mean = $\frac{\text{Sum of all runs}}{\text{Total number of players}}$



$$\begin{aligned}
 &= \frac{6 + 8 + 10 + 10 + 15 + 15 + 15 + 50 + 80 + 100 + 120}{11} \\
 &= \frac{429}{11} \\
 &= 39
 \end{aligned}$$

Here, 15 occurs 3 times.

∴ Mode = 15.

Median is the middle observation

∴ Median = 15 (6th observation)

Thus, Mean = 39, Mode = 15 and median = 15.

No, the mean, mode and median are not same.

3. The weights (in kg.) of 15 students of a class are:

38, 42, 35, 37, 45, 50, 32, 43, 43, 40, 36, 38, 43, 38, 47

(i) Find the mode and median of this data.

(ii) Is there more than one mode?

Answer:

Total number of students = 15

Weights of 15 students = 38, 42, 35, 37, 45, 50, 32, 43, 43, 40, 36, 38, 43, 38, 47.

Arranging in ascending order,

32, 35, 36, 37, 38, 38, 38, 40, 42, 43, 43, 43, 45, 47, 50

(i) Mode is the observation that occurred highest number of times.

Thus, 38 and 43 occur highest number of times.

∴ Mode = 38 and 43.



Also, median = 40 (8th observation)

(ii) Yes, there are two modes.

4. Find the mode and median of the data: 13, 16, 12, 14, 19, 12, 14, 13, 14

Answer:

Given data = 13, 16, 12, 14, 19, 12, 14, 13, 14

Arranging the data in ascending order, we get 12, 12, 13, 13, 14, 14, 14, 16, 19.

(i) Mode is the observation that occurs highest number of times.

∴ Mode = 14

(ii) median is the middle observation.

∴ Median = 14 (5th observation)

5. Tell whether the statement is true or false:

(i) The mode is always one of the numbers in a data.

(ii) The mean is one of the numbers in a data.

(iii) The median is always one of the numbers in a data.

(iv) The data 6, 4, 3, 8, 9, 12, 13, 9 has mean 9.

Answer:

(i) True

(ii) False

(iii) True

(iv) False