

Mathematics

Complete solution.

class - VII, Ch: 03. "Data - Handling"

Ex - 3.2.

Points

Mode: The mode of set of all observations is observation that occurs most often.

Median: The appropriate middle value of the data is called Median by arranging data in ascending order.

Q.1. Sol. We arrange the data in ascending order: 5, 9, 10, 12, 15, 16, 19, 20, 20, 20, 20, 23, 24, 25, 25.

Here, 20 occurs more frequently.

\therefore Mode = 20

Median is the middle observation.

\therefore 20 is the median.

Yes, both mode and median are same.

Q.2. Sol. We arrange the data in ascending order: 6, 8, 10, 10, 15, 15, 15, 50, 80, 100, 120.

$$\text{Mean} = \frac{\text{Sum of observations}}{\text{No. of observations}}$$

$$= \frac{429}{11} = \underline{39.}$$

Mode: Here, 15 occurs more frequently.

$$\therefore \text{Mode} = \underline{15.}$$

Median is the middle observation

$$\therefore \text{Median} = \underline{15.}$$

Mean, mode and median are not same.

Q. 3. Sol.

The data in ascending order:

25, 32, 36, 37, 38, 38, 38, 40, 42, 43,
43, 43, 45, 47, 50.

Mode: Here, 38 and 43 occurs more frequently that is 3 times each.

$$\therefore \text{Mode} = \underline{38 \text{ and } 43.}$$

Median is the middle observation

$$\therefore \text{Median} = \underline{40.}$$

Yes, there are two modes.

Q.4 Sol.

The data in ascending order:

12, 12, 13, 13, 14, 14, 14, 16, 19.

Here, 14 occurs more frequently.

∴ Mode = 14.

Median is middle observation

∴ Median = 14.

Q.5. Sol.

(i) True

(ii) False

(iii) True.

$$(iv) \quad \underline{\text{Mean}} = \frac{6+4+3+8+9+12+13+9}{8} \quad \checkmark$$

$$= \frac{64}{8} = \underline{\underline{8}}$$

Hence, it is false.