

NCERT Exemplar Solutions by Dev Anoop (Bathinda)

Exercise 14.2 Exemplar Problems class ix

1.

Marks	No. Of Students	Class Size	Adjusted Frequency
00 - 20	10	20	10
20 - 40	15	20	15
40 - 60	20	20	20
60 - 100	25	20	12.5

Not correct, because all class sizes are not equal. The frequency has to be adjusted before drawing a histogram as shown in the table above.

2. The observations in ascending order are 11, 40, 41, 44, 46, 48, 52, 53, 54, 62, 96, 98.

No. of observations = 12 (even)

Middlemost observations are 6th, 7th

$$\text{Median} = \frac{52 + 53}{2}$$

$$= 52.5 \text{ which is an appropriate central tendency.}$$

Every observation has frequency one, so mode is not an appropriate central tendency.

3. The child did not understand that the observations have to be arranged in ascending/ descending order before finding median.

Correct Method

The observations in ascending order are 3, 5, 14, 18, 20.

No. of observations = 5 (odd)

Middlemost observation is 3rd

Median = 14.

The child did not understand that the observations have to be arranged in ascending/ descending order before finding median.

4. No, the observations have first to be arranged in ascending/ descending order before finding the median.

Correct Method

The observations in ascending order are 1, 1, 2, 3, 4, 5, 6, 7, 8, 9

No. of observations = 10 (even)

Middlemost observations are 5th, 6th

$$\text{Median} = \frac{4 + 5}{2}$$

$$= 4.5$$

5. No, it is not correct.

Correct Statement

In a histogram, the area of each rectangle is proportional to the frequency of its class.