

FlexiPrep

NCERT Mathematics Class 9 Exemplar Ch 14 Statistics and Probability Part 6

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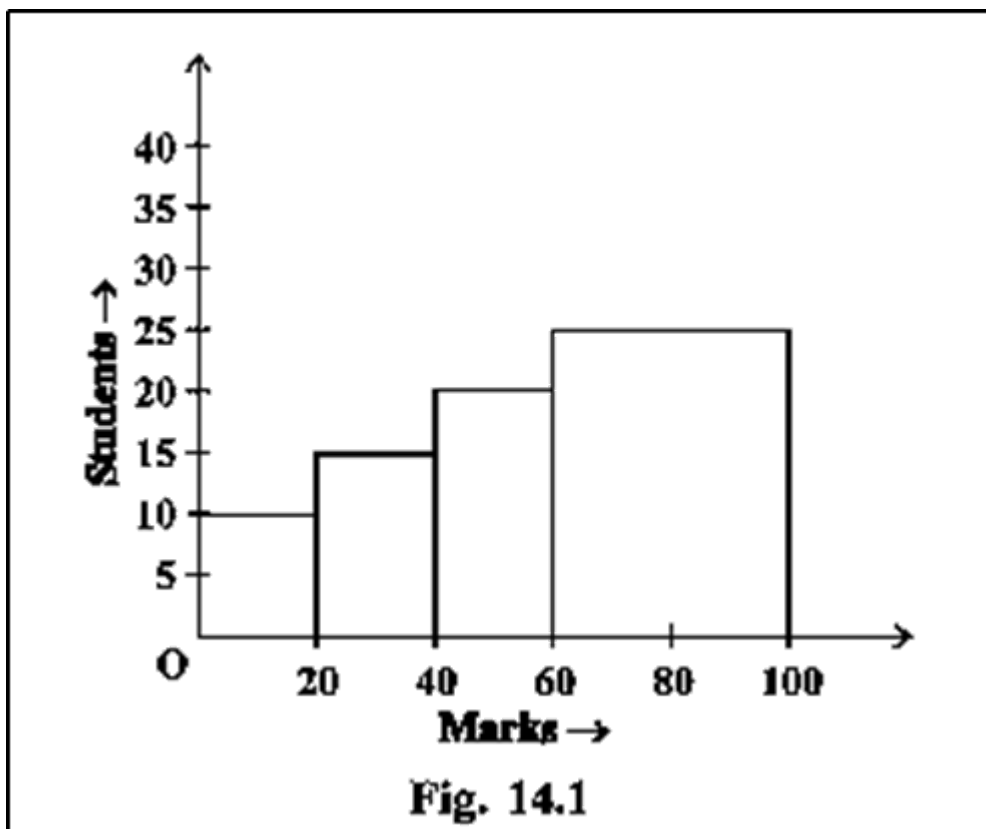
Exercise 14.2

Q.1. The frequency distribution:

Marks	0 – 20	20 – 40	40 – 60	60 – 100
Number of Students	10	15	20	25

The frequency distribution

Has been represented graphically as follows:



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Do you think this representation is correct? Why?

Answer: Not correct. The classes are of varying widths, not of uniform widths.

Q.2. In a diagnostic test in mathematics given to students, the following marks (out of 100) is recorded:

46, 52, 48, 11, 41, 62, 54, 53, 96, 40, 98, 44 which 'average' will be a good representative of the above data and why?

Answer: Median will be a good representative of the data, because

(i) Each value occurs once,

(ii) The data is influenced by extreme values.

Q.3. A child says that the median of 3, 14, 18, 20, 5 is 18 . What doesn't the child understand about finding the median?

Answer: Data has to be arranged in ascending (or descending) order before finding the median.

Q.4. A football player scored the following number of goals in the 10 matches:

1, 3, 2, 5, 8, 6, 1, 4, 7, 9 since the number of matches is 10 (an even number), therefore, the median

$$= \frac{5^{\text{th}} \text{ observation} + 6^{\text{th}} \text{ observation}}{2}$$

$$= \frac{8 + 6}{2} = 7$$

Is it the correct answer and why?

Answer: No, the data have first to be arranged in ascending (or descending) order before finding the median.

Q.5. Is it correct to say that in a histogram, the area of each rectangle is proportional to the class size of the corresponding class interval? If not, correct the statement.

Answer: It is not correct. In a histogram, the area of each rectangle is proportional to the frequency of its class.

Q.6. The class marks of a continuous distribution are: 1.04, 1.14, 1.24, 1.34, 1.44, 1.54 and 1.64 Is it correct to say that the last interval will be 1.55 – 1.73 ? Justify your answer.

Answer: It is not correct. Reason is that difference between two consecutive marks should be equal to the class size.