

# Mathematics

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(Chapter – 13) (Statistics & Probability)(Exemplar Problems)  
(Class – X)

## Exercise 13.1

Choose the correct answer from the given four options:

### Question 3:

If  $x_i$ 's are the mid-points of the class intervals of grouped data,  $f_i$ 's are the corresponding frequencies and  $\bar{x}$  is the mean, the  $\sum(f_i x_i - \bar{x})$  is equal to

- (A) 0                      (B) -1                      (C) 1                      (D) 2

### Answer 3:

- (A) 0

**Solution:**

We know that the mean of the data is given by  $\bar{x} = \frac{\sum f_i x_i}{n}$ , where  $n = \sum f_i$

$$\therefore \sum(f_i x_i - \bar{x}) = \sum f_i x_i - \sum \bar{x}$$

$$= n\bar{x} - n\bar{x}$$

$$= 0 \quad [ \sum x_i = n\bar{x} ]$$



Hence, the option (A) is correct.

