

## Statistics Ex 7.1 Q5 Answer:

Given:

$x_i$	8	12	15	p	20	25	30
f.	12	16	20	24	16	8	4

Mean = 16.6

First of all prepare the frequency table in such a way that its first column consist of the values of the variate  $(x_i)$  and the second column the corresponding frequencies  $(f_i)$ .

Thereafter multiply the frequency of each row with corresponding values of variable to obtain third column containing  $(f_i x_i)$ .

Then, sum of all entries in the column second and denoted by  $\sum f_i$  and in the third column to obtain

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	٦,	f	$\int f(x)$

$x_{i}$	$f_{i}$	$f_i x_i$
8	12	96
12	16	192
15	20	300
p	24	24 p
20	16	320
25	8	200
30	4	120
	$\sum f_i = 100$	$\sum f_i x_i = 1228 + 24p$

We know that mean, 
$$\overline{X} = \frac{\sum f_i x_i}{\sum f_i}$$

$$16.6 = \frac{1228 + 24p}{100}$$

By using cross multiplication method

$$1228 + 24p = 16.6 \times 100$$
$$24p = 1660 - 1228$$
$$= \frac{432}{24}$$
$$= 18$$

Hence, 
$$p = 18$$

\*\*\*\*\*\*\*\*\*\* END \*\*\*\*\*\*\*