



Statistics Ex 7.2 Q5

**Answer :**

Let the assume mean be  $A = 25$  .

marks ( $x_i$ ):	frequency ( $f_i$ ):	$d_i = x_i - A$ $= x_i - 25$	$f_i d_i$
15	5	-10	-50
20	8	-5	-40
22	11	-3	-33
24	20	-1	-20
25	23	0	0
30	18	5	90
33	13	8	104
38	3	13	39
45	1	20	20
	$\sum f_i = 102$		$\sum f_i d_i = 110$

We know that mean,  $\bar{X} = A + \frac{1}{N} \sum_{i=1}^n f_i d_i$

Now, we have  $N = \sum f_i = 102$ ,  $\sum f_i d_i = 110$  and  $A = 25$  .

Putting the values in the above formula, we get

$$\begin{aligned}
 \bar{X} &= A + \frac{1}{N} \sum_{i=1}^n f_i d_i \\
 &= 25 + \frac{1}{102} \times (110) \\
 &= 25 + \frac{110}{102} \\
 &= 25 + 1.078 \\
 &= 26.078 \\
 &\approx 26.08 \text{ (approximate)}
 \end{aligned}$$

Hence, the average number of marks is 26.08.

Statistics Ex 7.2 Q6

**Answer :**

Let the assume mean be  $A = 4$ .

No. of students absent ( $x_i$ ):	No. of days ( $f_i$ ):	$d_i = x_i - A$ $= x_i - 4$	$f_i d_i$
0	1	-4	-4
1	4	-3	-12
2	10	-2	-20
3	50	-1	-50
4	34	0	0
5	15	1	15
6	4	2	8
7	2	3	6
$\sum f_i = 120$			$\sum f_i d_i = -57$

We know that mean,  $\bar{X} = A + \frac{1}{N} \sum_{i=1}^n f_i d_i$

Now, we have  $N = \sum f_i = 120$ ,  $\sum f_i d_i = -57$  and  $A = 4$ .

Putting the values in the above formula,

$$\begin{aligned}\bar{X} &= A + \frac{1}{N} \sum_{i=1}^n f_i d_i \\ &= 4 + \frac{1}{120} \times (-57) \\ &= 4 - \frac{57}{120} \\ &= 4 - 0.475 \\ &= 3.525 \\ &\approx 3.53 (\text{approximate})\end{aligned}$$

Hence, the mean number of students absent per day is approximately 3.53.

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