E - CONTENT

Subject : Economics
Class : B.A Part III (Paper VII)
Topic : Calculation of Mean in Discrete Series.

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✡ Calculation of Mean in Discrete Series : Direct Method

$$\bar{x} = \frac{\Sigma fx}{\Sigma f} \quad \text{or} \quad \frac{\Sigma fx}{N}$$

Example :

Q. Describe the mean of these discrete Series :

Size of Term: 6 7 8 9 10 11 12
Frequency : 5 8 9 12 6 6 4

Solution :-

Size of Term (x)	Frequency	fx
6	5	30
7	8	56
8	9	72
9	12	108
10	6	60
11	6	66
12	4	48
	N or $\Sigma f = 50$	$\Sigma fx = 440$

Mean: $\bar{x} = \frac{\Sigma f x}{\Sigma f} = \frac{440}{50} = 88.$

- Short - Cut Method :—

$$\boxed{\bar{x} = A + \frac{\Sigma f d_x}{N}} \quad \text{or} \quad \boxed{\bar{x} = A + \frac{\Sigma f d_x}{\Sigma f}}$$

Q. Describe average Height of Students in these frequency Distribution:

Height (in Inch)	No. of Students
64	1
65	6
66	10
67	22
68	21
69	17
70	14
71	5
72	3
73	1

Solution:

Height x	No. of Students f	Deviation $(x - 68)$ d_x	$f d_x$
64	1	-4	-4
65	6	-3	-18
66	10	-2	-20
67	22	-1	-22
68	21	0	0
69	17	1	17
70	14	2	28
71	5	3	15
72	3	4	12
73	1	5	5
	$\Sigma f = 100$		$\Sigma f d =$ $-64+77$ $= 13$

$$\bar{x} = A + \frac{\Sigma f d_x}{\Sigma f}$$

$$= 68 + \frac{13}{100}$$

$$= 68 + .13$$

$$= 68.13 \text{ inches.}$$