

Calculation of MEAN in Continuous Series

① Long Method (Real mean Method)

Steps:-

① Find $x =$ Midpoint of C.I.

② Find $N = \sum f$

③ Find fx

④ Find $\sum fx$

⑤ Find $M = \frac{\sum fx}{N}$

Discrete

Ques Find the mean from the following data

Score :— (C.I)	5-9	10-14	15-19	20-24	25-29	30-34
frequency	3	3	5	4	3	2

5, 6, 7, 8, 9

Solution

Scores (GI)	f	x mid points	fx
5-9	3	7	21
10-14	3	12	36
15-19	5	17	85
20-24	4	22	88
25-29	3	27	81
30-34	2	32	64
	<u>N=20</u>		<u>$\Sigma fx = 375$</u>

① Mid points

② • N=20

$$\Sigma fx = 375$$

$$\text{Mean } (M) = \frac{\Sigma fx}{N}$$

$$= \frac{375}{20}$$

$$M = 18.75 \text{ Ans}$$



Assumed Mean Method

Short method :- steps :-

- (1) Find x
- (2) Find N
- (3) Find A.M from x
- (4) Find $d = x - A.M$
- (5) Find fd
- (6) Find $\sum fd$
- (7) Find $M = A.M + \left(\frac{\sum fd}{N} \right) \times i$

C.I	f	x_i	$d = x - 17$	fd
5-9	3	7	-2	-6
10-14	3	12	-1	-3
15-19	5	17 A.M	0	0
20-24	4	22	1	4
25-29	3	27	2	6
30-34	2	32	3	6
$N = 20$				$\sum fd = 7$

$$\underline{A.M = 17}$$

$$M = A.M + \frac{\sum fd}{N} \times i$$

$$= 17 + \frac{7}{20} \times 5$$

$$= 17 + \frac{7}{4}$$

$$= 17 + 1.75$$

$$\boxed{M = 18.75}$$

Ans ✓