

Q Calculating Median from a Continuous series.

C.I	f
5-10	7
10-15	15
15-20	24
20-25	31
25-30	42
30-35	30
35-40	26
40-45	15
45-50	10
$N=200$	

Step 1: Calculate

Cumulative frequencies. [Start calculating from the lowest C.I].

Step 2: Calculate the Median class / or locate the median class. \downarrow

$$\frac{N}{2} = \frac{200}{2} = 100$$

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100 lies in the C.F 119
and hence the median lies
between 25-30.

C.I	f	C.F
5-10	7	7
10-15	15	22
15-20	24	46
20-25	31	77 C.F
25-30	42	119 → Median class
30-35	30	149
35-40	26	175
40-45	15	190
45-50	10	200

Step 3: Apply the formula:

$$m \text{ or } mda = L + \frac{\frac{N}{2} - CfP \times i}{fm}$$

Here, (L) = is the lower limit
of class interval in which
the median falls.

(N) = Number of scores

(CfP) = Cumulative frequency
preceding or before the

Class interval which contains
the median.

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f_m = Frequency in the interval
containing median.

i = size of the Class Interval

$$\Rightarrow 25 + \frac{200 - 77}{42} \times 5$$

$$= 25 + \frac{100 - 77}{42} \times 5$$

$$= 25 + \frac{23}{42} \times 5$$

$$= 25 + 0.547 \times 5$$

$$mdn = 27.73.$$