Note 3: In case of unequal class intervals, the same procedure have to be followed to find Median.

Mode

In any frequency distribution, Mode is that value which comes repeatedly.

Say 2, 5, 9, 7, 5, 15

Here, 5 comes twice, but other numbers come only once.

So, Mode is 5

For Continuous Series where we have class intervals with frequency, we will Calculate Mode from the following formula.

$$\text{Mode} = l + \frac{f_1 - f_0}{2f_1 - f_0 - f_2} \times i$$

where l = lower class-boundary of the modal class

f_1 = frequency of the modal class

f_0 = frequency of the class previous to modal class

f_2 = frequency of the class next to modal class

i = width of the modal class.
(or size of the modal class)

As for example

Marks :	30-40	40-50	50-60	60-70	70-80	80-90
No. of students	5	8	12	20	15	8

Solution We prepare the table

CI	f	
30-40	5	
40-50	8	
50-60	12	$[f_0]$
60-70	20	$[f_1]$
70-80	15	$[f_2]$
80-90	8	

Here we have seen maximum frequency is 20, so (60-70) is the modal class

$f_1 = 20$, $f_0 = 12$

$f_2 = 15$, $l = 60$

Hence Mode $(M_0) = 60 + \frac{20-12}{2\times 20 - 12 - 15} \times 10$

$= 60 + \frac{8}{40-27} \times 10$

$= 60 + \frac{80}{13}$

$= 60 + 6.15$

$= 66.2$ (app.) Marks.

Note : Mode can be located graphically.
From histogram, we can locate mode.