Missing trequency math using median formula;

problem: An incomplete frequency distribution

in given below, where the median is 33.5

and total-incomplete missing frequency by applying

Median Johnwala.

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	4	16	2	10.0	2	6	4

Soms

class interval	Frequency	Cumulative Inequency
0-10	4	4
10-20	16	20
20-30	77	20+1
30-40	700	120+31
40-50	12	120+11+12
50-60	6	126+1,1+12
60-70	4	130+11+12
	N=230	

Let the missing trequency of and of respectively 1 Here, N= 230

Therefore the equation is

$$130+1_1+1_2 = 230$$

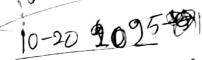
We know.

e know,

Median. Me = L<sub>1</sub> + 
$$\frac{N}{2}$$
 -  $\frac{10-20}{5}$   $\frac$ 

Here

$$\frac{N}{2} = \frac{230}{2} = 115 \text{ th Observation}$$



: therefore median class is (30-40) 50-60 5 45HM

$$33.5 = 30 + \frac{115 - (20 + \frac{1}{3})}{100} \times 10$$

$$= 33.5 = 30 + \frac{95-11}{100} \times 10$$

$$= 33.5 - 30 = \frac{95 - 11}{10}$$

$$= 3.5 = \frac{95-11}{10}$$



Now puring the value of 11 in equation (i)

$$= 3$$
  $\frac{1}{2} = 100 - 60$ 

Therefore the missing trequency are 60 and 40

## Midding frequency using mode formula

Problem: The mode of the following data is 33.5 and the total frequency is 100.

Find the missing frequency & and y.

Sugar	0-10	10-20	20-30	30-40	40-50	50-60
Frequenc	7	12	×	28	8	3

Sol2:

Class Interval	Frequeorcy
0-10	7
10-20	12
20-30	×
30-40	28
40-50	8
50-60	9

Mode 33.5 lies in the class 30-40.

30-40 is model class.

By Mode formula

$$M_0 = L + \frac{\Delta_1}{\Delta_1 + \Delta_2} \times C$$

=> 
$$33.5 = 30 + \frac{28-2}{(28-2)+(28-4)} \times 610$$

=> 
$$3.5 = \frac{28-x}{56-x-4} \times 10$$

Total number of observations are 100

Solving (1) and (2) We get

Him From the following data find out the missing trequencies at modal marks of a group of 94 Students is 54.

Marks	0-20	20-40	40-60	60-80	80-700
No. 05 Students	10	a	30	b	14
	1				