



Statistics Ex 7.5 Q12

Answer :

The given data is shown below.

Number of cars	Frequency
0-10	7
10-20	14
20-30	13
30-40	12
40-50	20
50-60	11
60-70	15
70-80	8

Here, the maximum frequency is 20 so the modal class is 40-50.

Therefore,

$$l = 40$$

$$h = 10$$

$$f = 20$$

$$f_1 = 12$$

$$f_2 = 11$$

$$\therefore \text{Mode} = l + \frac{f - f_1}{2f - f_1 - f_2} \times h$$

$$= 40 + \frac{20 - 12}{2 \times 20 - 12 - 11} \times 10$$

$$= 40 + \frac{8}{17} \times 10$$

$$= 40 + 4.7$$

$$= 44.7$$

Thus, the mode of the data is 44.7.

***** END *****