

SES'S L.S.RAHEJA COLLEGE OF ARTS AND COMMERCE

Course: Business Statistics

Unit: II and III

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1. Calculate mean and standard deviation

age	No. of persons	x	fx	X ²	Fx ²
0-6	2	3	6	9	18
6-12	2	9	18	81	162
12-18	3	15	45	225	675
18-24	2	21	42	441	882
24-30	1	27	27	729	729
	10		138		2466

$$\text{Mean} = \frac{\sum fx}{\sum f}$$

$$= \frac{138}{10}$$

$$= 13.8$$

$$\text{Variance} = \frac{\sum fx^2}{\sum f} - \text{mean}^2$$

$$= 2466/10 - 190.44$$

$$= 246.6 - 190.44$$

$$= 56.16$$

$$\text{Standard deviation} = \sqrt{56.16}$$

$$= 7.49.$$

2. Calculate mean and standard deviation

0-10	10-20	20-30	30-40	40-50
2	5	7	5	1

3. Find the mode :

Class intervals	Frequency
10-20	2
20-30	5
30-40	6
40-50	3

$$\text{MODE} = l_1 + \frac{f_1 - f_0}{(f_1 - f_0) + (f_1 - f_2)} (l_2 - l_1)$$

$$= 30 + \frac{6 - 5}{(6 - 5) + (6 - 3)} (40 - 30)$$

$$= 33.33$$

4. Find the mode :

Class intervals	Frequency
0-5	15
5-10	23
10-15	25
15-20	22
20-25	10

Answers of Assignment given tutorial lesson 1

1. Find Median and quartiles for each of the following data:

a.

Class Intervals	Frequency
0 – 25	20
25 – 50	25
50 – 75	20
75 - 100	35

Median = 56.25

$Q_1 = 25.2$

$Q_3 = 75.28$

c.

Class Intervals	Frequency
0 – 10	16
10 – 20	24
20 – 30	35
30 -40	25
40 -50	20

Medium = 25.7143

$Q_1 = 13.75$

$Q_3 = 30$