

Stats Assignment

1. Q Find the mean :-

<u>Range</u>	<u>Frequency</u>
1-10	2
11-20	7
21-30	10
31-40	3
41-50	1

<u>Soln:</u>	<u>Range</u>	<u>f</u>	<u>m</u>	<u>mf</u>
	0.5 - 10.5	2	5.5	11
	10.5 - 20.5	7	15.5	108.5
	20.5 - 30.5	10	25.5	255
	30.5 - 40.5	3	35.5	106.5
	40.5 - 50.5	1	45.5	45.5
	<u>Σf 23</u>			<u>$\Sigma mf = 526.5$</u>

$$\text{Mean} = \frac{\Sigma mf}{N} = \frac{526.5}{23} = 22.89 \quad \underline{\text{Ans}}$$

(b) <u>Range</u>	<u>Frequency</u>
1 - 10	2
10 - 20	7
20 - 30	15
30 - 40	10
40 - 50	11
50 - 60	5

<u>Soln:</u>	<u>Range</u>	<u>f</u>	<u>m</u>	<u>mf</u>
	0 - 10	2	5	10
	10 - 20	7	15	105
	20 - 30	15	25	375
	30 - 40	10	35	350
	40 - 50	11	45	495
	50 - 60	5	55	275
		<u>$\Sigma f = 50$</u>		<u>$\Sigma mf = 1610$</u>

$$\text{Mean} = \frac{\Sigma mf}{N} = \frac{1610}{50} = 32.2$$

<u>Exam Score</u>	<u>No. of students</u>
51 - 60	4
61 - 70	8
71 - 80	15
81 - 90	8
91 - 100	5

<u>Soln: Exam Score</u>	<u>f</u>	<u>m</u>	<u>mf</u>
50.5 - 60.5	4	55.5	222
60.5 - 70.5	8	65.5	524
70.5 - 80.5	15	75.5	1132.5
80.5 - 90.5	8	85.5	684
90.5 - 100.5	5	95.5	477.5
<u>$\Sigma f = 40$</u>		<u>$\Sigma mf = 3040$</u>	

$$\text{Mean} = \frac{\Sigma mf}{N} = \frac{3040}{40} = 76$$

(2) find the mean:-

	<u>Group 1</u>	<u>Group 2</u>
Mean wages	75	60
No. of workers	1000	1500

Soln:-

$$\text{Mean} = \frac{\bar{x}_1 N_1 + \bar{x}_2 N_2}{N_1 + N_2}$$

$$= \frac{75(1000) + 60(1500)}{1000 + 1500} = \frac{75000 + 90000}{2500}$$

$$= \frac{165000}{2500} = 66$$

(3) Complete Mean:-

<u>Medical Exam</u>	<u>No. of examined</u>	<u>Mean weight</u>
A	50	118
B	60	120
C	90	115

$$\text{Soln:- Mean} = \frac{\bar{x}_1 N_1 + \bar{x}_2 N_2 + \bar{x}_3 N_3}{N_1 + N_2 + N_3}$$

$$\frac{113(50) + 120(60) + 115(90)}{50 + 60 + 90}$$

$$= \frac{5650 + 7200 + 10350}{200} = \frac{23200}{200} = 116$$