PAGE No
DATE

Practice Question

Assignment - 1 (Stats)

1) a)

range	frequency
1 - 10	2
11 - 20	7
21 - 30	10
31 - 40	3
41 - 50	1

Exclusive Data

x	f	m	mf
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
	N = 23		526.5

$$\bar{x} = \frac{\Sigma mf}{N} = \frac{526.5}{23} = 22.8.$$

b)

DATE

b)

range	frequency	m	mf
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
	N=50		1610

$$\bar{x} = \frac{\Sigma mf}{N} = \frac{1610}{50} = 32.2.$$

c)

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

x	f	m	mf
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
	N=40		3043.

$$\bar{x} = \frac{\Sigma mf}{N} = \frac{3043}{40} = 76.$$

2)

	Group 1	Group 2
Mean wages	75 $(\bar{x}_1)$	60 $(\bar{x}_2)$
No. of workers	1000 (N_1)	1500 (N_2)

$$\bar{x}_{12} = \frac{\bar{x}_1 N_1 + \bar{x}_2 N_2}{N_1 + N_2}$$

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

$$= \frac{75000 + 90000}{2500}$$

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

3) Medical Examination

	No. of Examined (Group 1)	Mean weight (Group 2)
A	50 (N_1)	113 $(\bar{x}_1)$
B	60 (N_2)	120 $(\bar{x}_2)$
C	90 (N_3)	115 $(\bar{x}_3)$

$$\bar{x} = \frac{N_1\bar{x}_1 + N_2\bar{x}_2 + N_3\bar{x}_3}{N_1 + N_2 + N_3}$$

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

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

$$= \frac{23200}{200} = 116$$