Tutorial 3
Statistics

1. Arithmetic mean and standard deviation of 30 items are 20 and 3. If item 22 and 15 are dropped. Find new mean and standard deviation. Calculate mean and standard deviation if item 22 is replaced by 8 and 15 by 17.

2. From the following data find who is more variate.

Sachin	25	55	86	35	46	45	78	96	20	10
Virat	42	35	99	60	48	80	34	30	26	44

3. From the following data calculate first four moments about mean, $\beta_1,\ \beta_2$.

x	1	2	3	4	5	6	7	8	9
f	1	6	13	25	30	22	9	5	2

4. From the following data calculate first four moments about mean, $\beta_1,\ \beta_2$.

x	0-10	10-20	20-30	30-40	40-50
f	10	18	30	24	20

5. The first four moments about value 10 are 5, 34, 70, 160. Find mean, standard deviation, coefficient of Skewness and Kurtosis.

6. Calculate the coefficient of correlation and regression lines for the following data.

x	6	2	10	4	8
y	9	11	5	8	7

7. If the two lines of regression are $9x + y - \lambda = 0$ and $4x + y = \mu$ and means of x and y are 2 and 3 respectively . Find the value of λ, μ. and the coefficient of correlation between x and y.