MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY, JAIPUR

MET-901 Research Methodology

Assignment-3 (For Ph.D students)

1. The table below shows the height, x, in inches and the pulse rate, y, per minute, for 9 people. Find the correlation coefficient and interpret your result.

X	68	72	65	70	62	75	78	64	68
Y	90	85	88	100	105	98	70	65	72

2. Draw a scatter plot of the following data and after determining its degree of correlation (find r and r2), find the line of best fit for predicting the prime lending rate (y) from the inflation rate (x).

Inflation rate (x)	3.3	5.8	6.2	6.5	7.6	9.1	11
Prime lending rate (y)	5.2	6.8	8	6.9	9	7.9	10.8

   a) Draw a scatter diagram. Does there appear to be a linear relationship between inflation and prime lending rate?

   b) Compute and interpret the correlation coefficient and coefficient of determination

   c) Find and sketch the line of best fit for predicting Prime lending rate from Inflation rate.

   d) Estimate the prime lending rate for an inflation rating of 34.

3. The height and weight of baseball players are in table ("MLB heights weights," 2013). Create a scatter plot and find a regression equation between height and weight of baseball players. Then use the regression equation to find the weight of a baseball player that is 75 inches tall and for a baseball player that is 68 inches tall. Which weight that you calculated do you think is closer to the true weight? Why?

   Table: Heights and Weights of Baseball Players

Height	76	76	72	74	75	71	77	78	77	76	72	72	72	75	74	73
Weight	212	224	180	210	215	200	235	235	194	185	180	170	220	228	210	180

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