Math 175 – Fall 2016 Names:_____
Assignment: G15 _____
Due: Today _____

(1) Give an example of

(a) Two variables that are positively correlated.

(b) Two variables that are negatively correlated.

(c) Two variables that are (probably) not correlated.

(2) Using the data from 15 automobile accidents, the correlation coefficient between the combined speeds of the cars (x) in an accident and the amount of damage done (y) is 0.7831. The regression equation for the two variables is $y = 801.518 + 162.845x$.

(a) Is this a significant correlation? YES NO

(b) If the answer to part (a) is YES, then predict the amount of damage done in an accident in which the combined speeds of the car involved was 100 mph.

(c) A car traveling at 28 mph is involved in an accident with another car which did $9,780 in damages to the cars. Estimate how fast the other car was driving.

(3)

(a) Draw a scatterplot for the data below on the back of this page and sketch an estimate for the line of best fit.

x	1	3	3	6	7	9	11	12	12
y	49	49	45	50	38	38	32	27	32

(b) The correlation coefficient for the data is r = - 0.91022. Determine whether the data are correlated at the significance level $\alpha = 0.1$.