Unit 7 Discussion Example - Initial Post

Download the MM305_DataSets zip file to your computer.

Select a data set with at least two numerical variables. You will NOT be able to copy and paste a graph into the Discussion Board, so you should copy your graph to a Word Document and attach it to your post.

Determine the following information on your selected data set. Be sure to answer all questions using complete sentences.

1. What are the two variables? Do you think there might be a correlation between the two variables (before you analyze the data)?
2. Create a scatterplot with a simple linear regression (see video in Live Binder).
3. What is the linear regression (prediction line) equation? What is the coefficient of determination r^2?
4. Do you think that there is a strong positive or strong negative correlation? Why or why not? Is this result what you expected?
5. Attach the scatterplot to your post.

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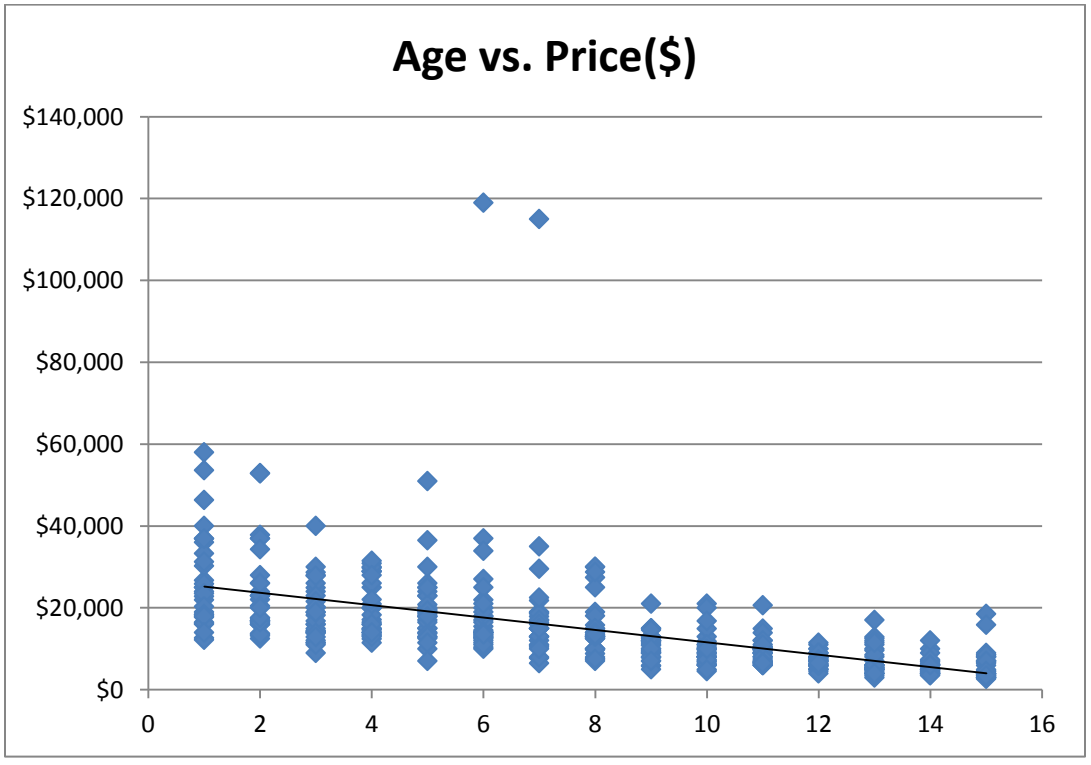
1. I choose to download and analyze the UsedCar.xlsx

Two numeric variables are: Age and Price ($)

Yes! I am thinking there might be a correlation between how old a used car is and what it's selling price is.

2. The scatter plot for age vs price is:



3. The regression analysis output is below. The linear regression equation (prediction line) is :

y = 26,712.80889 - 1512.885*x* or Price = 26,712.80889 - 1512.885(age)

The coefficient of determination, R Square = 0.331341532.

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.575622734							
R Square	0.331341532							
Adjusted R Square	0.329848991							
Standard Error	9306.165871							
Observations	450							
ANOVA								
	df	*SS*	*MS*	*F*	*ignificance F*			
Regression	1	19226096595	19226096595	221.9982	4.57E-41			
Residual	448	38798916004	86604723.22					
Total	449	58025012599						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*Upper 95.0%*
Intercept	26712.80889	923.2011973	28.93498077	1.4E-104	24898.47	28527.15	24898.47	28527.15
Age	-1512.885	101.5385941	-14.89960554	4.57E-41	-1712.44	-1313.33	-1712.44	-1313.33

4. This gives a weak correlation.

5. See above scatter plot.