Monopoly Lab

1. Complete the following table and enter it in a NEW document in your calculator.

Spaces From Go	Price of Property	

2. Create a scatterplot on the calculator, SKETCH it below

3. Describe the association between the number of spaces from go and the price of the property.

4. Before calculating a correlation coefficient, describe how this data set meets all 3 conditions required for a correlation coefficient

5. What is the correlation coefficient? What does it verify about the association between *Distance From Go* and *Price*?

6. What is the linear regression equation (write it in context)?

7. What does the y-intercept tell you about the prices on the Monopoly board?

8. What does the slope tell you about the prices on the Monopoly board?

9. If the first "Chance" spot was replaced with a property, what should it be worth? Show your work.

Residuals are the difference between the predicted values and the actual values. They tell us many useful things about our linear regression model.

10. Calculate the residuals for each of the spaces on the Monopoly board. Fill those in on the table on the front.

11. Put a star on your scatterplot on the point with the largest positive residual and a circle on the point with the largest negative residual. What do you notice about those points?

12. Create a residual plot on the calculator. Sketch it below.

R^2 is a measure of the variation in the y's that can be predicted by the linear model. This value is seen in the plot of the residuals. An R^2 of 0 means that none of the variance is in the model; all is in the residuals, an R^2 of 100% means that all of the variance can be explained by the model, there are no values in the residuals.

13. Complete the following phrase with the R^2 measurement that was calculated:

In Monopoly, _____% of the variation in *prices* is accounted for by variation in the number of spaces from go.