

Notes 2-5 Scatterplots & Lines of Regression
Algebra II

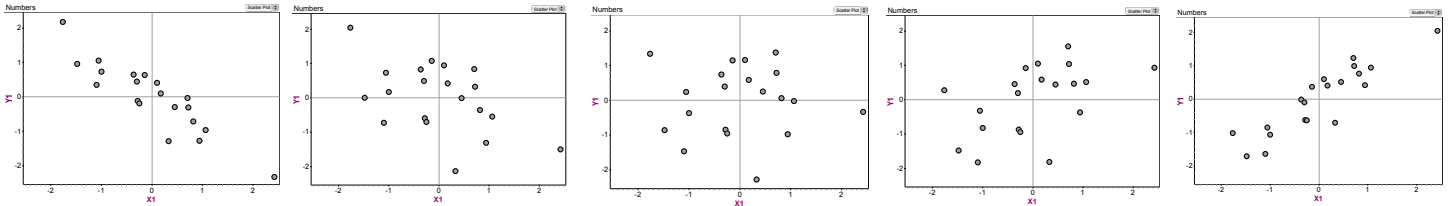
Name _____

Period _____

Regression - _____

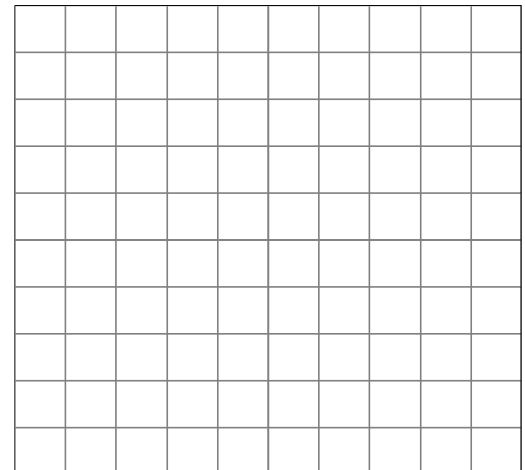
Correlation - _____

Correlation Coefficient - _____



1. A group of students weighed and then counted the Skittles in several 61.5 gram bags. Their data are included in the table below. Make a scatterplot on your calculator and sketch it below.

<i>count</i>	<i>weight</i>
62	66.2
61	65
60	63.6
60	63.5
58	61.8
61	64.5
61	65.9
62	64.3
61	64.2
59	63.6
58	61.4
61	65.1



2. Correlation coefficient = _____ Line of Best Fit: _____

3. Based on the graph and the correlation coefficient, describe the relationship between the number of Skittles in the bag and the weight of the bag.

4. Interpret the slope of the line of best fit in the context of the problem.

5. Interpret the *y*-intercept in the context of the problem.

To find the line of best fit:

STAT – EDIT – independent var. in L1 and dependent var. in L2

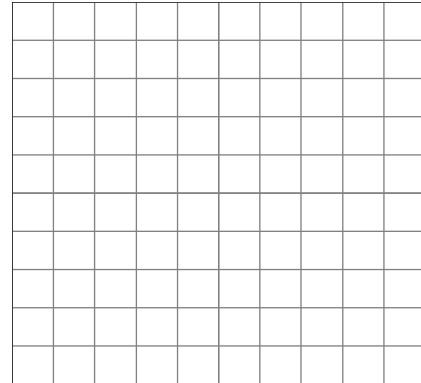
STAT – CALC - #4 (LinREG)

To get r to appear in the output:

2nd "0" [CATALOG]; type "D" (above x^{-1}) and scroll down until the pointer is in front of "DiagnosticOn"; hit ENTER twice

6. Anthropologists can use the femur, or thighbone, to estimate the height of a human being. The table shows the results of a randomly selected sample of measurements. Make a scatter plot of the data with femur length as the independent variable.

Femur Length and Height(cm)	
<i>Length</i>	<i>Height</i>
36	160
32	143
46	187
29	142
35	161
38	164
30	140
27	131



7. Correlation coefficient = _____ Line of Best Fit: _____

8. Based on the graph and the correlation coefficient, describe the relationship between the length of the femur and the height of the subject.

9. Interpret the slope and y -intercept of the line of best fit in the context of the problem.