Linear Regression TI Activity: Hot Air Balloon Altitude vs. Pressure

1. Input the following chart in the statistical lists of a TI graphing calculator. The data involves pressure measurements in inches of Mercury at various altitudes in feet for a hot air balloon.

Altitude (ft)	Pressure (inches Hg)
0	30
5,000	25
10,000	22
20,000	16
30,000	10

I did it! _____

[20 points]

2. Have the calculator make a scatter plot. Also, sketch one below. Label the axes; use a consistent scale for each axis, and include a title.

[20 points]

3. Have the calculator add to the scatter plot the line of best fit, along with its equation. Also have the calculator find the R^2 value and the correlation coefficient (R). Record all the results below using 8 decimal places for all constants or coefficients.

Linear Equation: _____
Slope: _____
Y-intercept: _____
R^2 value: _____
R value: _____

[40 points]

4. Use the table in the TI graphing calculator to find the predicted pressure for altitudes of 35,000 and 40,000 feet (using the linear regression formula). Round to the nearest inch.

35,000 feet _____

40,000 feet _____ [20 points]

This activity is due on _____ .

Do your best! Live and learn!