What if you don't have a graphing calculator to make a scatter plot?

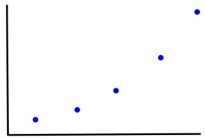
- Use a sheet of graph paper
- Use spreadsheet software such as Excel
- Use the internet. Check my blog for links to websites that create scatter plots.

What if you don't have a graphing calculator to find the regression equation?

- Use spreadsheet software such as Excel
- Use the internet. Check my blog for links to websites that finds regression equations.

Make a scatter plot of this data.

Speed (x)	30	40	50	60	70
Stopping distance (y)	25	55	105	188	300



This scatter plot looks more like a curve than a line.

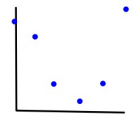
We'll do a Quadratic Regression to find the equation of a Parabola that models this data.

STAT → CALC → 5: QuadReg

$y = 0.14x^2 - 7.27x + 116.74$

1. Make a scatter plot of the data below. Sketch the scatter plot, labeling the axes.

Years since 1988	0	2	4	6	8	10
Avg House Price (thousands of dollars)	165	154.5	124.5	115	128	165



This appears to be best modeled with a Quadratic Equation

a) Find a regression equation to model this data. Round to the nearest hundredth.

EQ: QuadReg: $y = 1.83x^2 - 19.55x + 172.73$

b) Find the average price of a house in 1985. Round to the nearest dollar.

$x = -3$ $y = \$247,850$

c) Find the average price of a house in 2000. Round to the nearest dollar.

$x = 12$ $y = \$201,650$

r Correlation Coefficient

A statistic (number) that quantifies how good of a fit an equation is for a set of data.

Set up the calculator to give r

2nd

0

Arrow key down until you find ▶DiagnosticOn

ENTER

ENTER

ReCalc LinReg