TI-83 or TI-84 Graphing Calculator
Linear and Quadratic Regression Lines
(This technique is especially helpful in Math 1001 and Math 1431)

First, we must turn on Diagnostics on your calculator.
Note: you only have to do this once (the first time you do this activity).
2^{nd} Catalog
Diagnostics ON
Enter

Problem #1: Given the following information:

x	2	5	8	9	10	12	16
y	5	10	14	16	18	21	27

Create a scatter plot of the data
STAT
Edit
Enter data for x in L_1
Enter data for y in L_2
2^{nd} Y= (for Stat Plot) / Enter / Enter (to turn ON) / Type: scatter plot
Zoom 9 (for Zoom Stat)

Create a linear model for the data and graph both scatter plot and line.
STAT
CALC
4 (LinReg (ax+b))
L_1 , L_2 ,
VARS
Y-VARS
1 (for function)
1 (to use y_1) (This puts the equation into y_1 for you)
Enter
Zoom 9

Note: the closer to "1" your r^2 value is, the better the fit of the line to the data.

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Problem #2: Given the following information:

x	-2	-1	0	1	2	3	4	5	6	7	8
y	15	5	2	1	3	10	20	35	55	75	176

Clear the previous work from the calculator

Y=
CLEAR *(gets rid of the old equation)*
STAT
ClrList (#4)
L_1 , L_2
Enter *(empties out the lists safely)*

Create a scatter plot of the data

STAT
Edit
Enter data for x in L_1
Enter data for y in L_2
ZoomStat (Zoom 9)

Create a quadratic model for the data and graph both scatter plot and parabola.

STAT
CALC
5 (QuadReg)
L_1 , L_2 ,
VARS
Y-VARS
1 (for function)
1 (to use y_1)
Enter
Zoom 9