

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).

2nd Catalog

Diagnostics ON

Enter

Problem #1: Given the following information:

<i>x</i>	2	5	8	9	10	12	16
<i>y</i>	5	10	14	16	18	21	27

Create a scatter plot of the data

STAT

Edit

Enter data for *x* in L₁

Enter data for *y* in L₂

2nd 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))

L₁, L₂,

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