

Objective: To use the TI-84 Plus CE
to compare linear and quadratic
regressions.

1/17/19

To begin:

1.) $\boxed{2nd}$ (light blue)
Mem
 $\boxed{+}$

Memory Menu

7: Reset

1: All RAM

2: Reset

For Regressions

2.) \boxed{Mode}

STAT DIAGNOSTICS: ON (is highlighted)

• $\boxed{2nd}$ $\overset{\text{quit}}{\boxed{Mode}}$ Home Screen

Linear Regressions:

1.) \boxed{Stat}
1: Edit

	Weeks on diet	Weight
	L_1	L_2
	1	185
	2	180
	3	178
	4	170
	5	166
	6	165

2.) \boxed{Stat} →
CALC
4: LinReg ($ax+b$)
Store Reg EQ:
 $\boxed{\alpha}$ (green) $\overset{f4}{\boxed{+trace}}$ 1: Y,
Calculate (blinking)

Information of
analysis

Lin Reg

$$y = ax + b$$

$$a = -4.29$$

$$b = 189$$

$$r = -0.9810$$

Regression equation

$$y = -4.29x + 189$$

correlation coefficient

Strong negative correlation

3.) See graph

$y =$ (you should see regression equation in Y_1)

Plot 1 scroll up Enter

2^{nd} $y =$ ^{Stat Plot}

1: Plot 1 ... ON Enter

Graph

Zoom

9: Zoom Stat

Quadratic Regressions

L_1	L_2
-1	6
0	-1
1	-3
2	-1.5
3	5
4	15

Stat → CALC

5: Quad Reg

Store Reg EQ: Y_1

Calculate

$$y = ax^2 + bx + c \quad (\text{standard form})$$

$$a = 2.125$$

$$b = -4.53$$

$$c = -0.76$$

$$R^2 = 0.9992$$

$$y = 2.13x^2 - 4.53x - 0.76$$

strong positive correlation