TI Calculator Notes *Regression*

First, enter data into the Lists.

1)Press **STAT** --> **EDIT**

2)Enter data into the List. Press enter after each entry.

 Use **L1** for x, and **L2** for y- arrow keys will help move around

3) Press **STAT**

   Choose **CALC**

4) Choose the regression that is appropriate to the problem.

   Here it will be **LinReg(ax+b)**

5) Press **ENTER**

 This will paste that command onto the home screen

6) Type in **L1,L2** (or whatever lists are being used)
 Press **ENTER**

Note:
The **r** and the r^2 are called correlation coefficients and may
 or may not be on your viewing screen.

Note for the TI 83:
After keying in L1, L2, in step 6, the destination of the equation to be graphed (not plotted) is also keyed in, the regression equation is automatically copies to that function.

Y1 is in the | VARS | menu

```
LinReg(ax+b) L₁,
L₂,Y₁
```

```
LinReg
 y=ax+b
 a=8
 b=-37
 r²=1
 r=1
■
```

```
Plot1 Plot2 Plot3
\Y₁8▪X+-37
\Y₂=
\Y₃=
\Y₄=
\Y₅=
\Y₆=
\Y₇=
```

Note for the TI 82. To copy the equation into the y-editor without typing it in,
1) Open the equation editor.

2) Go to the | VARS | menu , select **Statistics**, select **EQ**, then find **RegEQ** and hit | ENTER. |
The equation will be pasted into Y1 or whichever Y that was selected

```
XY Σ EQ TEST PTS
1▪RegEQ
2:a
3:b
4:c
5:d
6:e
7↓r
```

```
Plot1 Plot2 Plot3
\Y₁8▪X+-37
\Y₂=
\Y₃=
\Y₄=
\Y₅=
\Y₆=
\Y₇=
```

Problem.
 A new county tax assessor has been hired to determine whether or not the tax revenue will be enough to cover a project in the future. A table has been made to determine the past tax four years' revenue since the inception of a new tax structure.   If we assume the revenue function to be linear and that all other factors remain constant over the next ten years, set up a linear regression and predict the tax revenue in five years in the year 2002.

Year	Year number since new structure	Tax in millions of dollars
1994	1	7.01
1995	2	7.52
1996	3	8.23
1997	4	9.33

(Hint: let the second column be the x variable)

To View the plot of the data,

1)press

2nd   STAT PLOT

```
STAT PLOTS
1:Plot1…On
   ⌐ L1   L2    ▫
2:Plot2…Off
   ⌐ L1   L2    ▫
3:Plot3…Off
   ⌐ L1   L2    ▫
4↓PlotsOff
```

2) Press   ENTER

```
Plot1  Plot2  Plot3
On  Off
Type: ▪▪  ⌐  ▥
      ▥▥  ▥▥  ⌐
Xlist:L1
Ylist:L2
Mark: ▫  +  ·
```
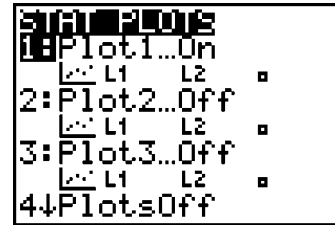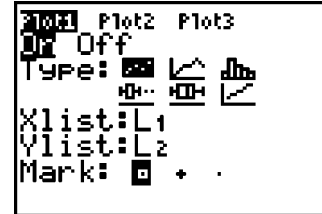
3)Toggle the **On Off** to **On** and set the rest up like the screen above
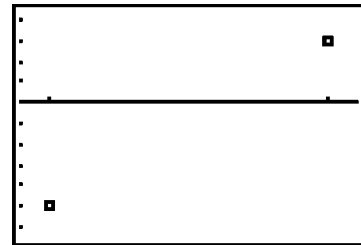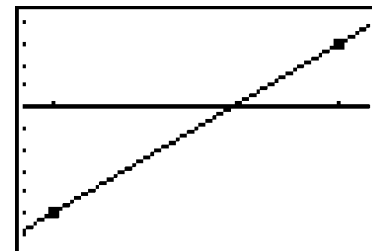
4) Press ZOOM then 9   which is   ZoomStat

5) To also view the regression equation
and the plots simultaneously, press GRAPH

Note: on the TI 82 to shut off STAT PLOT you must go back to step 2 above to toggle off. This
also works on the TI 83 but can also be done fromthe y-editor screen.