TI-83/84+ CALCULATOR REGRESSION HELPS

Entering Data/Plotting points:

1: $\boxed{Y=}$ button, then go up to PLOT1, select, de-select all other plots in this row (hit enter to select/deselect)

2: $\boxed{STAT}$—EDIT-- type x-values into L1, y-values into L2 (to clear/delete previous lists: highlight the name L1, etc. then hit $\boxed{CLEAR}$ and enter)

3: After entering data, hit $\boxed{ZOOM}$, then 9: ZOOMSTAT

Linear Regression:

1: from main screen, hit $\boxed{STAT}$—>CALC—#4LINREG(ax+b)

2: **If you see Xlist**: L_1, etc., scroll down to Store RegEQ: and type Y_1 here.

Or: **if you see LinReg (ax + b)**, then type the Y_1 after this (so it looks like **LINREG(ax +b) Y_1**).

This will send the equation directly to Y_1 so that we can look at its graph.

> *How to get Y_1 displayed:* press green $\boxed{ALPHA}$key, then F4 (over the TRACE key), select Y1
> *(or for older calcs, hit $\boxed{VARS}$ −> YVARS —> 1:FUNCTION —> 1:Y_1*
> *This will display Y_1 on main screen).*

3: When you have entered Y_1, select Calculate or hit Enter to do the technique. The calculator will return the linear equation and perhaps the correlation coefficient r (for some calc. settings). It will also place the linear regression equation into the Y_1 function for graphing.

4: Hit $\boxed{GRAPH}$ to see how well the line fits the data.

Nonlinear Regression: follow same steps as for Linear, except for when you get to Stat-Calc, choose a *different* type of regression whichever one you are wanting to find (exponential, quadratic, etc.).

Quadratic Regression: Stat-Calc-#5 QuadReg   (Produces $ax^2 + bx + c$)
Cubic Regression: Stat-Calc-#6 CubicReg   (Produces $ax^3 + bx^2 + cx + d$)
Quartic Regression: Stat-Calc-#7QuartReg   (Produces $ax^4 + bx^3 + cx^2 + dx + e$)
Logarithmic Regression: Stat-Calc-#9LnReg   (Produces $a + b\cdot\ln(x)$)
Exponential Regression: Stat-Calc-#0:ExpReg   (Produces $a*b\text{\textasciicircum}x$)