SCATTER PLOTS & REGRESSION ON THE TI-NSPIRE

SCATTER PLOTS

1. Enter data:
   a) Create a new Lists & Spreadsheet document.
   b) Type a name for each list at the top of the column.
   c) Enter the data for each list.

2. Create a scatter plot.
   a) Insert a new page (ctrl-docs) and choose Data & Statistics.
   b) When a rough plot appears, move your cursor to the box at the bottom of the page.
   c) Click on the box and select the name of the list to be graphed on the *x*-axis.
   d) Move to the box on the left edge (will be invisible). Click on it and select the name of the list to be graphed on the *y*-axis.
   e) The points should move to form the scatter plot.

3. Change the scale of the graph.
   a) Menu—5: Window/Zoom—1: Window Settings
   b) Make changes to the minimum and maximum values for each axis

REGRESSION LINES/CURVES

a) From the scatter plot, select Menu—4: Analyze—6: Regression—Choose Type. The graph and its equation will appear.
b) To see the correlation (r) and other details, return to the spreadsheet (ctrl—left arrow).
c) Put your cursor in a blank column. Select Menu—4: Statistics—1: Stat Calculations—Choose a type. Answer the questions. Be sure to have it save the RegEq to an *f#*. Select OK and the coefficients for the equation and the correlation will appear.
d) If you need to widen the column, Right Click (ctrl-menu) and choose resize.

MAKING PREDICTIONS

Given an x-value, predict y.

a) From the Spreadsheet page, switch to a Table of values by pressing ctrl-T.
b) Menu—2: Table—5: Edit Table Settings. Change Table Start to the needed x-value.
c) The table will now start with the given value. Look in an adjacent column to get the needed y-value.

Given a y-value, predict x.

a) Create a new Graphs page.
b) Press tab and arrow to the function number *(f#)* where you saved the regression equation. Press enter. (You may or may not see the graph appear.)
c) Move to the next available function *(f#)* and enter *f#(x)* = y-value.
d) If both graphs are not visible, you must zoom out until the intersection point is visible. Select Menu—4: Window/Zoom—4: Zoom out (or Right Click).
e) To find the coordinates of an intersection point, select Menu—6: Analyze Graph—4: Intersection
f) When a dotted vertical line appears, move it to a location on the left side of the intersection point and press enter. Then use the right arrow to move to a point on the right side of the intersection point. (A gray area should appear which encloses the intersection point.
g) Press Enter. The coordinates of the intersection point should appear. Drag any unnecessary labels out of the way if you cannot read it.