

1. A convenience store manager notices that sales of soft drinks are higher on hotter days, so he assembles the data in the table.

High Temperature (°F)	Number of cans sold
55	340
58	335
64	410
68	460
70	450
75	610
80	735
84	780

- a) Find and graph a linear regression equation that models the data.

Follow the steps below.

Directions for Linear Regression on the TI-84.

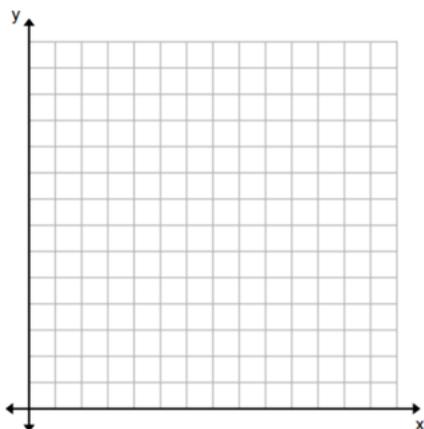
- 1) From the home screen, **Add Lists and Spreadsheet**.
- 2) At the top of column A type an appropriate label to represent the x-values. Enter the x-values in the **A** column. Touch **ENTER** after entering each value.
- 3) In column B do the same for your y-values. Again, you must hit **ENTER** after entering each value.
- 4) Use these calculator keys: **DOC**, **4: Insert**, **7: Data and Statistics**.
- 5) Move the cursor to the label on the x and y-axes. Choose the appropriate x and y labels that you named earlier.
- 6) Use these calculator keys to get your equation: **MENU**, **4: Analyze**, **6: Regression**, **1: Show Linear (mx+b)**

Write your equation here: _____

Sketch a graph of your equation below.

Directions for sketching the graph for each equation on the TI-84.

- 1) Put each equation into the **Y=** function.
- 2) Use the **WINDOW** key to change your graphing window as shown. Sketch a graph of each equation. Label the axes and use an appropriate interval on each axis.



2. Anthropologists use a linear model that relates femur length to height. The model allows an anthropologist to determine the height of an individual when only a partial skeleton (including the femur) is found. In this problem, we find the model by analyzing the data on femur length and height for the ten males given in the table.

Femur Length (cm)	Height (cm)
50.1	178.5
48.3	173.6
45.2	164.8
44.7	163.7
44.5	168.3
42.7	165.0
39.5	155.4
38.0	155.0

- a) Find and graph a linear regression equation that models the data.

Write your equation here: _____

Sketch a graph of your equation below.

