

Natural Gas is sold by the therm. The chart below gives the number of therms per month and the cost per therm. In addition to the cost of the gas, customers pay \$6.50 per month basic cost.

	therms	cost/therm
January	57	1.02209
February	57	1.08349
March	83	1.0635
April	73	1.08065
May	43	1.05416
June	25	0.97371
July	9	0.98722
August	8	0.97416
September	8	0.89541
October	7	0.81452
November	8	0.78916
December	17	0.8646

Step # 1

- On the TI-Nspire, open a new page – Lists and spreadsheets
- Column A,
 - At the top of column A, type the word **therms**.
 - To re-size the column heading, press [MENU], then Actions, select the re-size option. Column A should be highlighted, use your NavPad to wide the column. Press [enter]. Press [ESC] when you are done.
 - Enter the numbers
 - In row 1, put 57
 - In row 2, put 57
 - In row 3, put 83, etc.
- Column B,
 - At the top of column B, type the word **costper**.
 - Follow above directions to re-size the column.
 - Enter the numbers
 - In row 1, put 1.02209
 - In row 2, put 1.08349
 - In row 3, put 1.0635, etc.
- Column C,
 - At the top of column C, type the word **gascost**.
 - Follow above directions to re-size the column.
 - In the diamond row, type **=therms*costper**
- Column D
 - At the top of column D, type the word **total**
 - Follow above directions to re-size the column.
 - In the diamond row, type **=gascost + 6.50**
- Fill in the chart on the student results page.

Step #2

- Open a new Graphs and Geometry page
- Go to Menu, Graph Type, and Scatterplot
- Notice that a dark box is around the x value. Click the center button of the NavPad. A list should appear. Arrow up to select **therms**. Press Enter.
- Press the TAB key to move to the y value. Click the center button of the NavPad. Arrow up to select **total**. Press Enter.
- The Window will need to be reset. It can be set manually or by using Zoom-Data.
 - Press the Menu key, Window, Choose either Window Settings or Zoom-Stat.
 - To set Window Setting manually: select your x minimum, then TAB, to set your x maximum, then TAB, to set your y minimum, then TAB, to set your y maximum.
- Does the data appear to be linear?
- Sketch your graph and note your window on your student results page.

Step # 3

- Open a new Calculator Page
- Press Menu, Statistics, Stat Calculations, Linear Regression
- Click on the x List box and select **therms**, Enter
- Tab to the y List box, Click and select **total**, Enter.
- Go back to your scatterplot and put the equation on the scatterplot
 - Press Menu, Graph Type, Function
 - You will need to arrow up to find your equation. Once you press Enter, the equation will appear on the scatterplot.
- Answer the questions on your student results page.

Step #4

- Open a new Calculator page
- Type:
 - Sum(therms)
 - Mean(therms)
 - You may need to press Menu, Number, Convert to Decimal
 - Sum(costper)
 - Mean(costper)
 - Sum(gascost)
 - Mean(gascost)
 - Sum(total)
 - Mean(total)
- Answer the questions on your student results page.