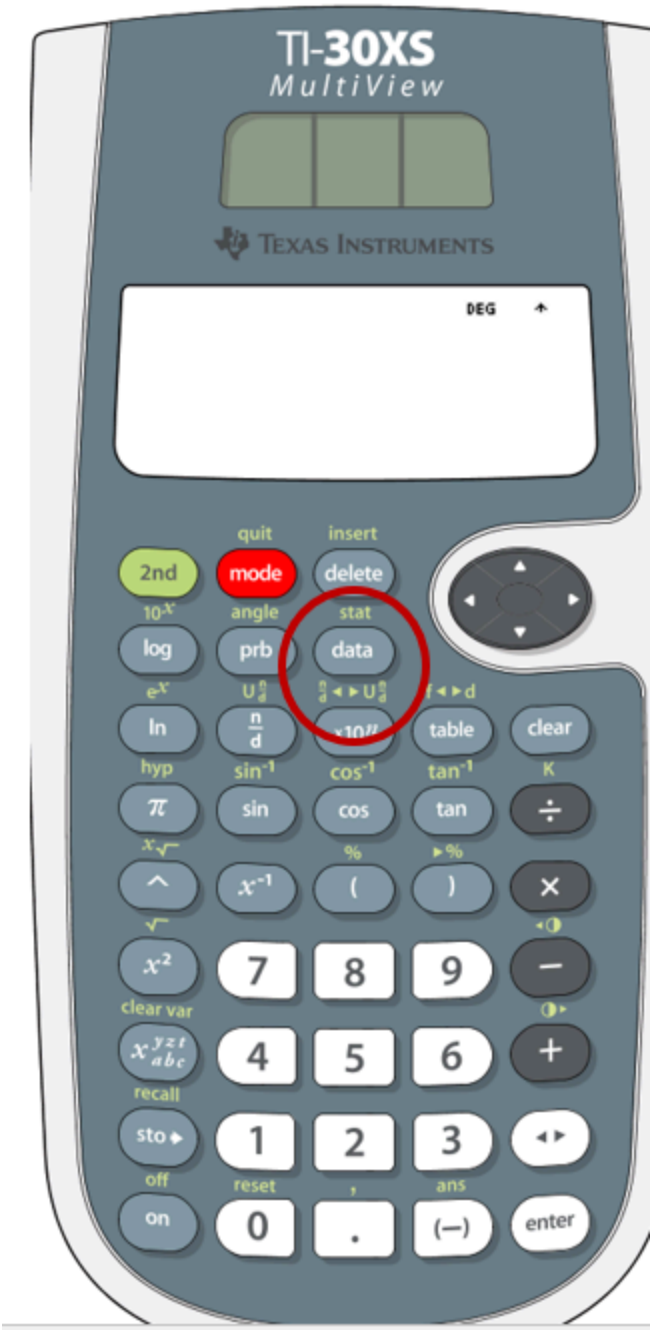
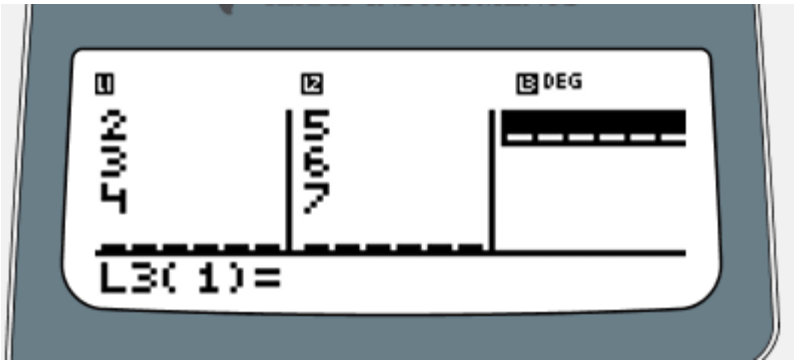
Statistics on the TI 30 xs

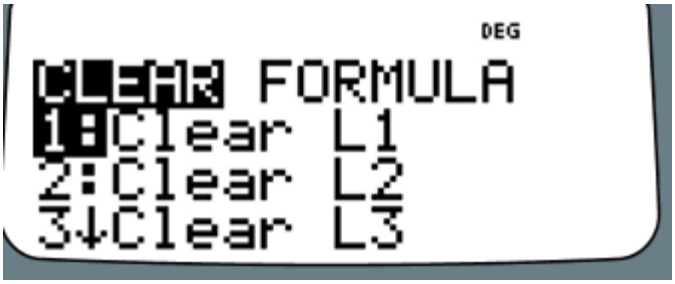
You can complete basic descriptive statistics such as mean, median, standard deviation and the 5-number summary on this calculator. You can also find the equation of the line of best fit (linear regression).



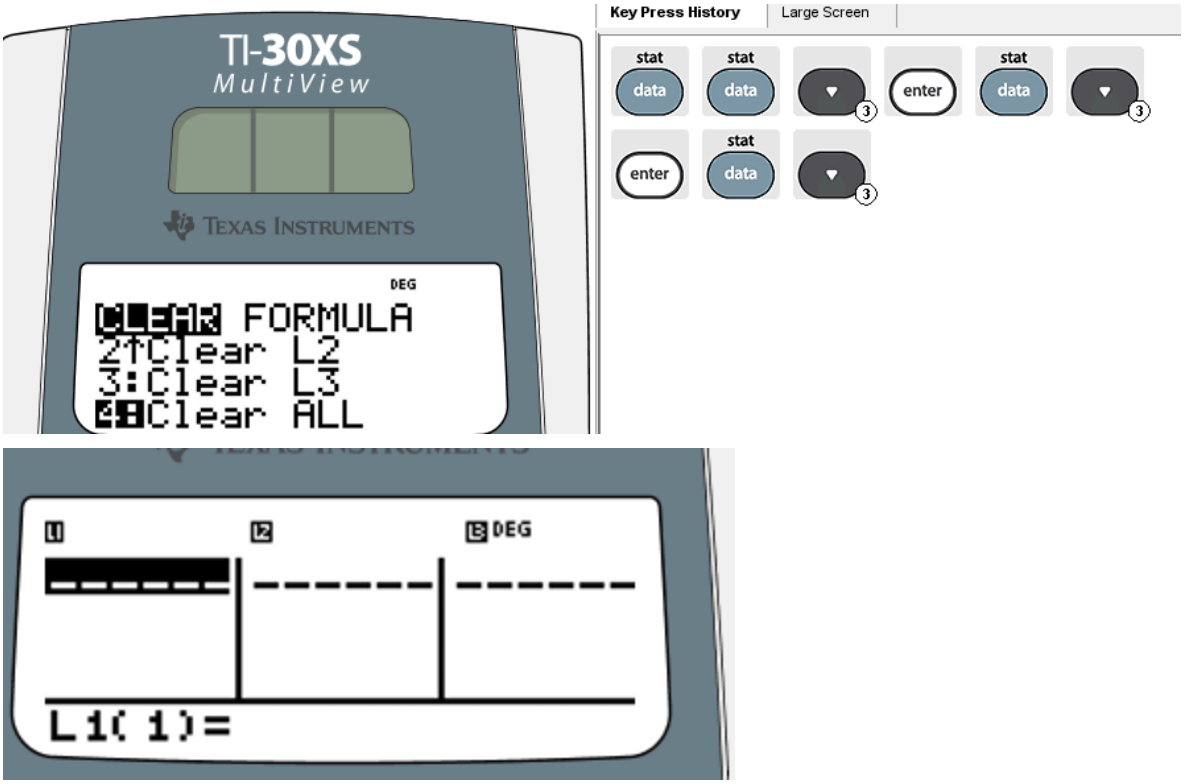
You will use the data key and the stat [2nd data] key.

Entering data

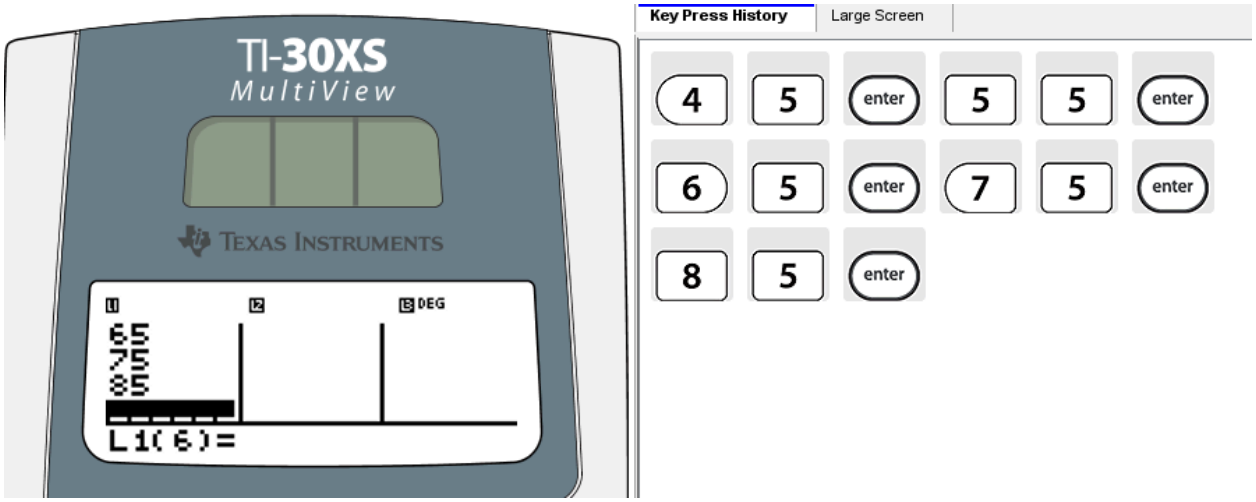
1. Press the data key. 

You will see the lists.
2. If there is data already in the list(s), clear that data.
   a. Press data a second time. 

b. Use the down arrow to cursor down to clear all, option 4 and press enter.

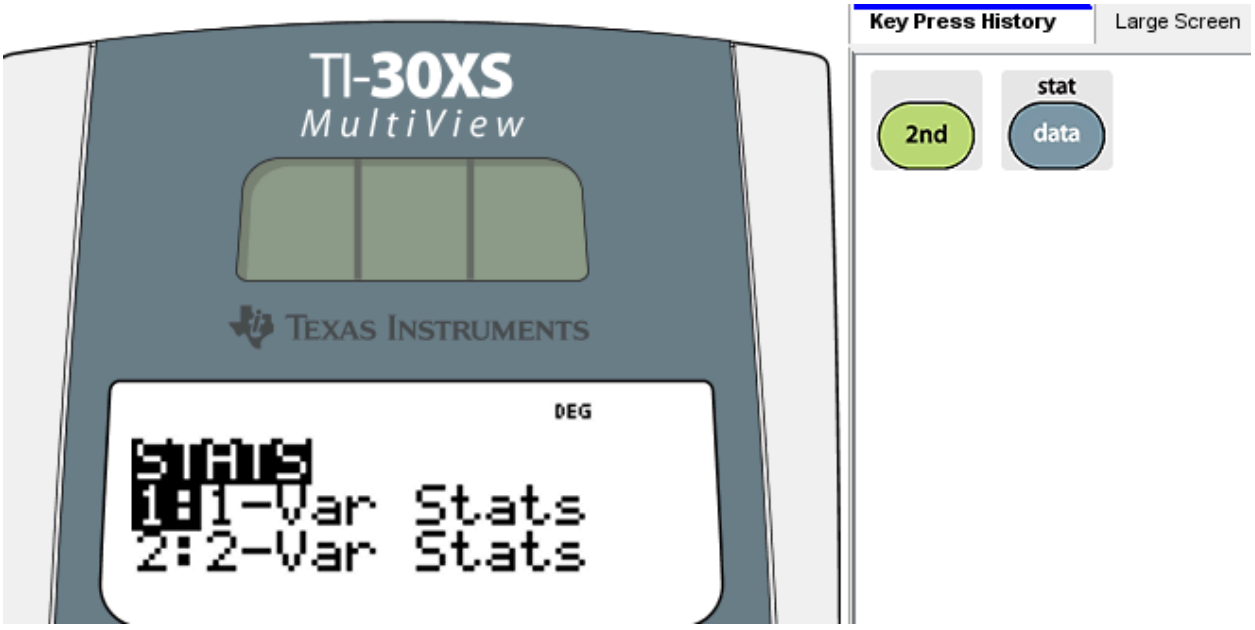


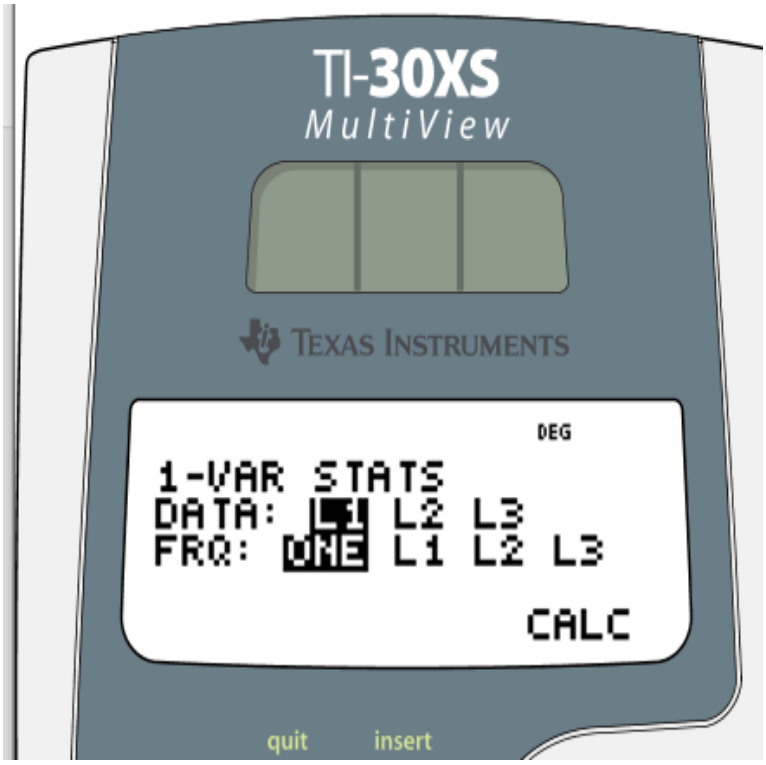
c. Enter the data. Press enter after typing in each value.



Finding basic statistics

1. After entering the data, press Stat [2nd data]



2. When I-Var Stats is highlighted, press enter.
3. 

If your data is in list 1, when the screen looks as shown, cursor down to calc and press enter.

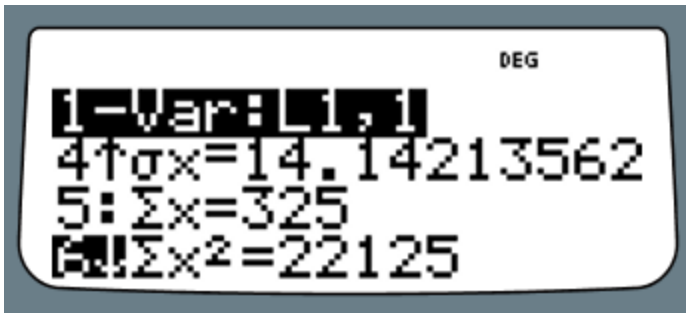
You could also enter your data in list 1 and the frequency of each data item in another list. In which case, make sure that list is highlighted after FRQ (frequency).

4. You will see the basic statistics for the data set. Cursor down to see each of these screens.

There are 5 data elements (n = 5)

The mean, $\bar{x}$ or arithmetic average is 65.

The sample standard deviation, Sx, is about 15.8



The population standard deviation σx, is about 14.1

The sum of the values Σx is 325

The sum of the values squared Σx^2 is 22125

The minimum value is 45

The boundary for the first quartile, Q1, is 50

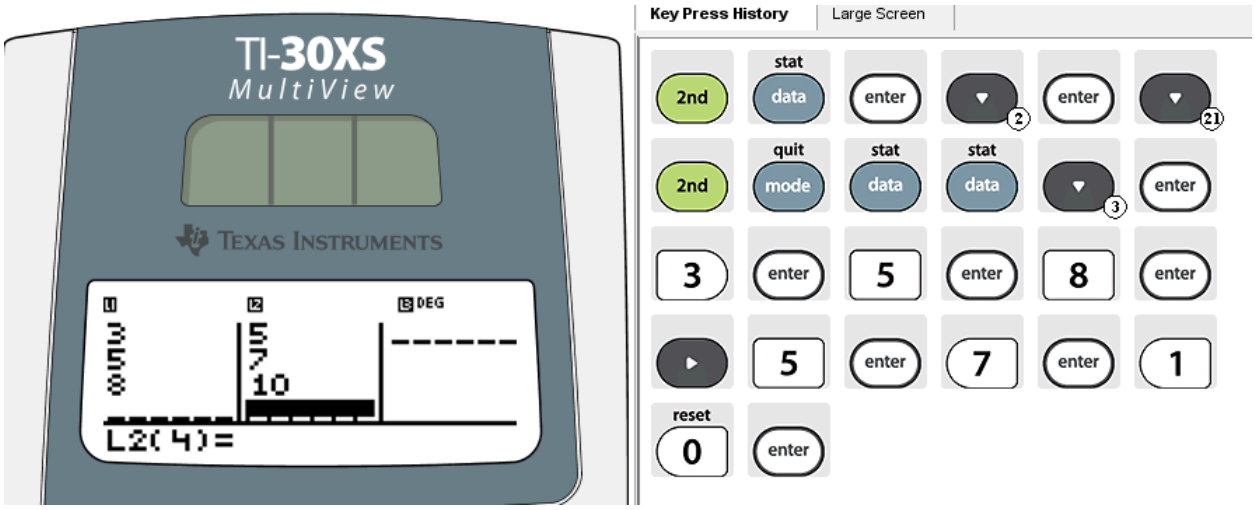
The median is 65

The boundary for the third quartile, Q3, is 80.

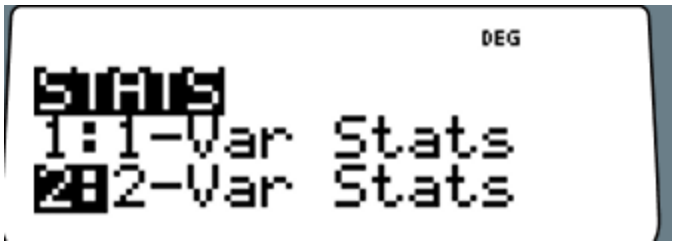
The maximum value is 85. This information is also used for the 5-number summary.

Finding the equation of a line from a table of values

1. Enter the x values in list 1 and the y values in list 2.



2. Enter Stat [2nd data] and cursor down to 2-Var Stats. Press enter.



3. Make sure your screen contains the correct lists and cursor down to CALC

4. Cursor down until you find the screen below, options D, E, F. The linear equation of a data set (also called the line of best fit, the regression line, equation of best fit) is y = mx + b.

a = 1 means the slope, m, is 1.
b = 2 means the vertical or y intercept, b, is 2
r =1 means the correlation coefficient is 1.
The equation of this line is
Y = x + 2

Example:

6. The table gives selected values for the linear function $f(x)$.

x	$f(x)$
5	12
10	19
15	26
20	33

Which of these functions has the same slope as $f(x)$?

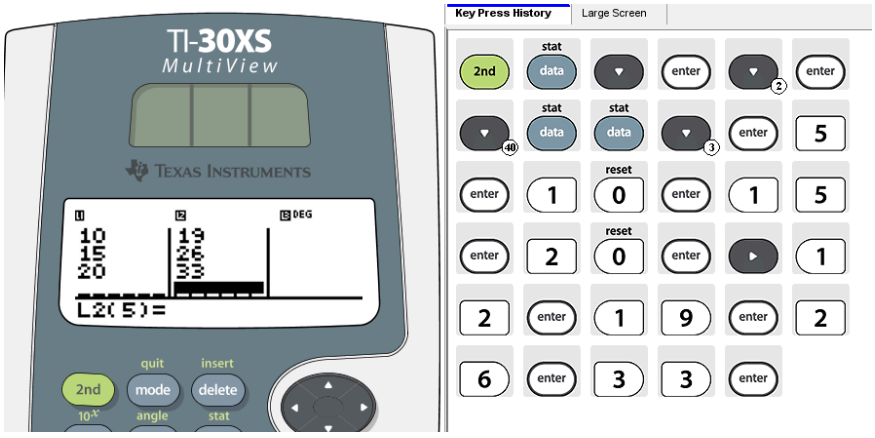
A. $g(x) = x + 7$

B. $h(x) = 2x + 2$

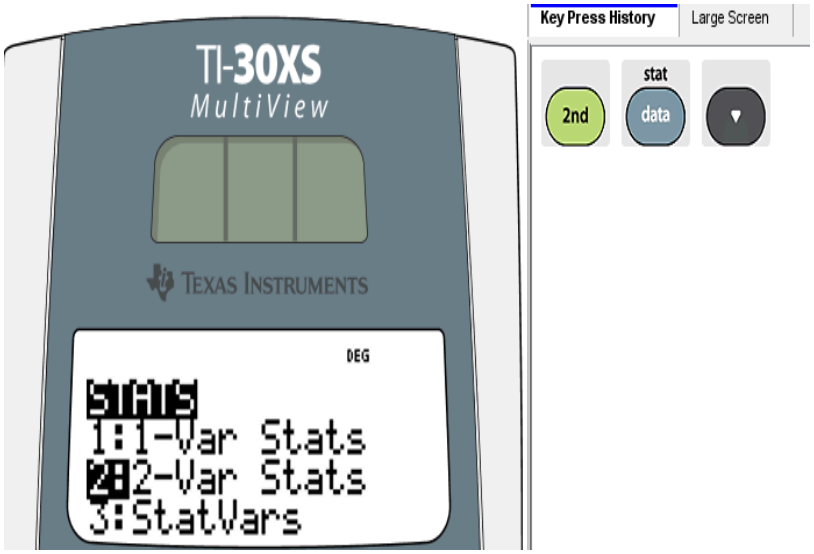
C. $q(x) = \frac{4}{5}x + 8$

D. $p(x) = \frac{7}{5}x + 5$

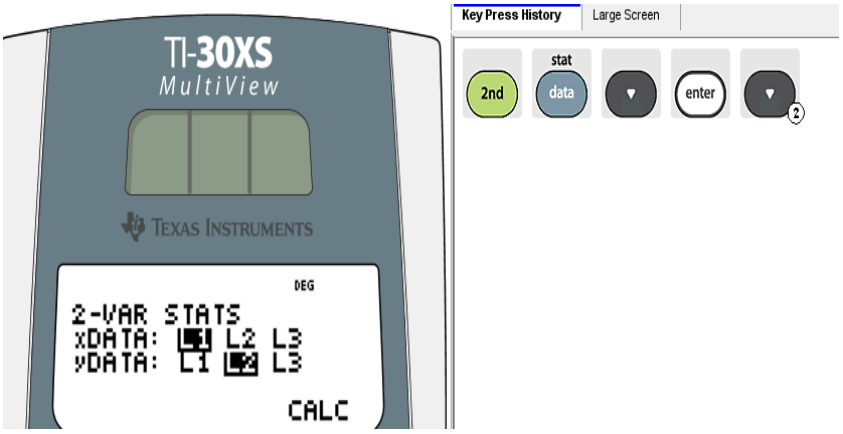
f(x) is another name for y. Enter the data into the calculator.



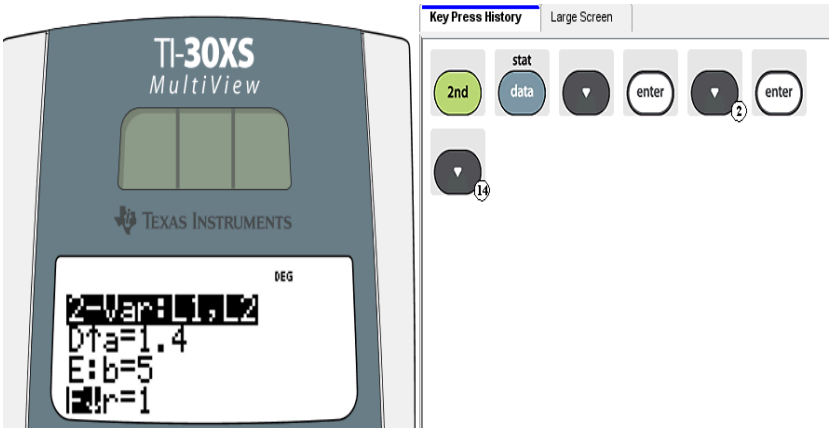
Press stat [2nd data], then enter



Make sure your lists are displayed correctly.



Scroll down to find a and b.



The equation of the line is y = 1.4 x + 5 or choice D