

# Making and Using Tables

## College Algebra

### Introduction

Using a table of values for a function is a good way to see overall trends while seeing exact values. With a calculator, you can generate a table of values quickly.

### Steps for Making Tables on Texas Instruments Calculators

To make a table of values with a TI graphing calculator, do the following:

1. Rewrite the formula so that the independent variable is  $x$  and the dependent variable is  $y$ .
2. Press the  $Y=$  button on the calculator and type the formula for  $Y_1$ .
3. Press  $2ND$  and  $WINDOW$  to get to the  $TBLSET$  menu.
4. Set the initial value for  $TblStart$  and the skip in the independent variable as  $\Delta Tbl$ .
5. Press  $2ND$  and  $GRAPH$  to see the table.

### Example 1

For the first, example, we will make a table of values for the function  $B = \frac{6t-1}{5t+2}$  for  $t = 3, 5, 7, \dots$

### Solution

The first step is to rewrite the formula using  $x$  and  $y$ :

$$y = \frac{6x - 1}{5x + 2}$$

Notice that the values for the independent variable start at 3 and increase by 2. We will have to make that adjustment in the table settings.

The calculator steps are below. Please follow along with your calculator.

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The TI-84 Plus family outputs fractions whenever you use the fraction bar. We want decimals for this course. One option is to type the function just like with the TI-83 Plus. The other is to use a calculator function to convert to decimals. The steps are below.

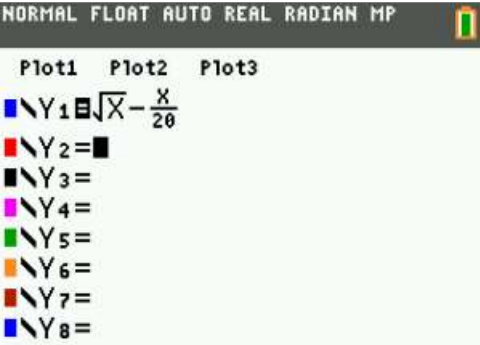
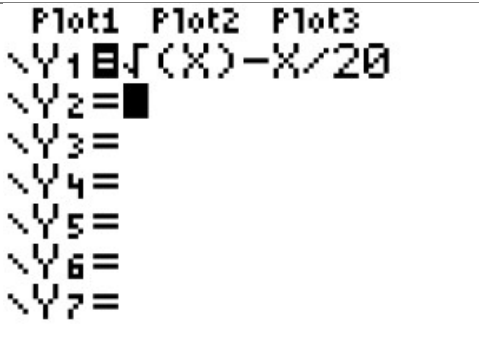



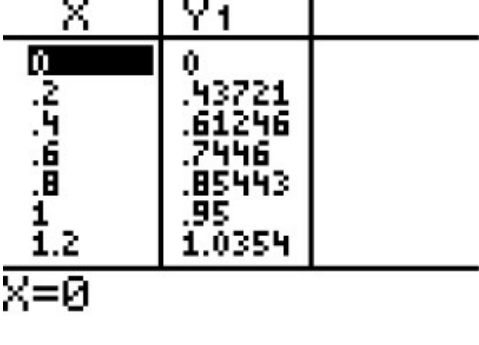
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## Example 2

For our second example, we will create a table of values for  $y = \sqrt{x} - \frac{x}{20}$  for  $x = 0, 0.2, 0.4, \dots$

### Solution

The process is very similar to the last problem. Follow along on your calculator.

Calculator Steps	TI-84 Plus CE	TI-83 Plus
<b>"2ND" →</b> <b>"Y="</b>  TI-84 Plus uses <b>"ALPHA"</b> and <b>"Y="</b> to enter fraction bar		
<b>"2ND" →</b> <b>"WINDOW"</b>  Press down to access settings  TblStart = 0 ΔTbl = 0.2		
<b>"2ND" →</b> <b>"GRAPH"</b>  This time, the TI-84 converts answers to decimals due to the square root.		

## Next Up

Now that we know how to make tables of values, we'll talk about limiting values.