

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 ΔTbl .
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.

Calculator Steps	TI-84 Plus CE	TI-83 Plus																																																						
“2ND” → “Y=”	<div>NORMAL FLOAT AUTO REAL RADIAN MP</div> <div>Plot1 Plot2 Plot3</div> <div>$\text{Y}_1 = \frac{6X-1}{5X+2}$</div> <div>$\text{Y}_2 =$</div> <div>$\text{Y}_3 =$</div> <div>$\text{Y}_4 =$</div> <div>$\text{Y}_5 =$</div> <div>$\text{Y}_6 =$</div> <div>$\text{Y}_7 =$</div> <div>$\text{Y}_8 =$</div>	<div>Plot1 Plot2 Plot3</div> <div>$\text{Y}_1 = (6X-1)/(5X+2)$</div> <div>$\text{Y}_2 =$</div> <div>$\text{Y}_3 =$</div> <div>$\text{Y}_4 =$</div> <div>$\text{Y}_5 =$</div> <div>$\text{Y}_6 =$</div>																																																						
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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.

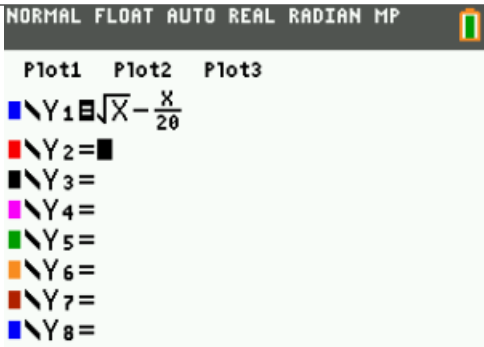
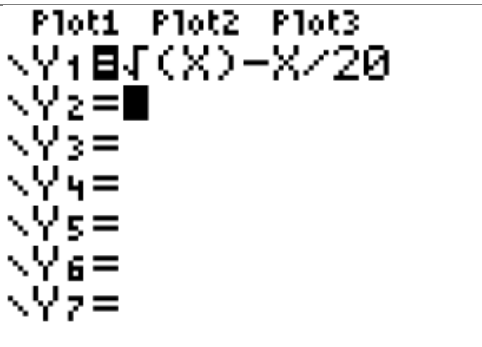


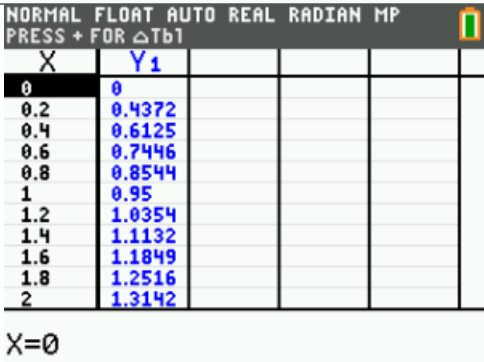
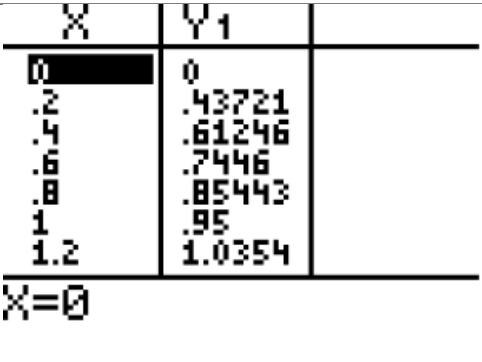
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Example 2

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
"2ND" → "Y=" TI-84 Plus uses "ALPHA" and "Y=" to enter fraction bar		
"2ND" → "WINDOW" Press down to access settings TblStart = 0 ΔTbl = 0.2		
"2ND" → "GRAPH" 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.