

Using a Table for More than One Function MathPrint View

Objectives

- Interpret a table with more than one function
- Use an Ask table to see y-values for two or more functions
- Use an Automatic table to see y-values for two or more functions

Interpret a table with more than one function

When we input two or more functions in the y= menu, the table displays the x-values only once.

Example 1: What ordered pairs are represented by this table?

x	$y_1 = 3x + 4$	$y_2 = -3x + 4$
1	7	1
-3	-5	13

(1,7) and (-3,-5) are ordered pairs on the graph of $y_1 = 3x + 4$. (The first and second columns)

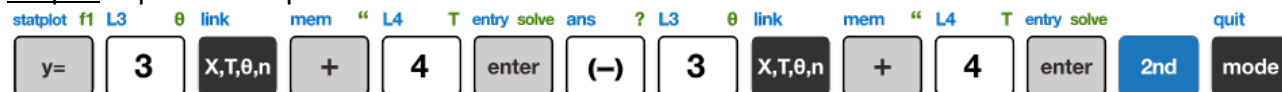
(1,1) and (-3,13) are ordered pairs on the graph of $y_2 = -3x + 4$. (The first and third columns)

Use an Ask table to see y-values for two or more functions

Example 2: Create one table for $y_1 = 3x + 4$ and $y_2 = -3x + 4$ using the ASK setup.

x	$y_1 = 3x + 4$	$y_2 = -3x + 4$
-34		
46		
-12		
0		
1003		

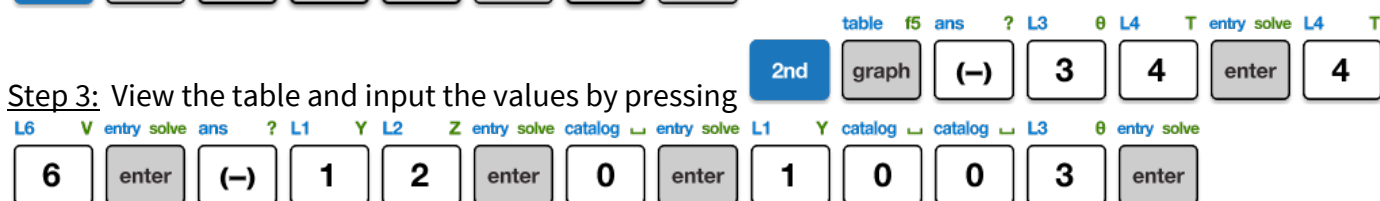
Step 1: Input both equations into the Y= menu.



Step 2: Set up the table. TblStart and Δ Tbl can be any values. Set Indpt to Ask and Depend as Auto.



Step 3: View the table and input the values by pressing



NORMAL FLOAT AUTO REAL RADIAN MP			NORMAL FLOAT AUTO REAL RADIAN MP			NORMAL FLOAT AUTO REAL RADIAN MP		
Plot1	Plot2	Plot3	TABLE SETUP			X	Y1	Y2
$Y_1=3X+4$			TblStart=0			-34	-98	106
$Y_2=-3X+4$			$\Delta Tbl=2$			46	142	-134
$Y_3=$			Indent: Auto Ask			-12	-32	40
$Y_4=$			Depend: Auto Ask			0	4	4
						1003	3013	-3005

Answer:

x	$y_1 = 3x + 4$	$y_2 = -3x + 4$
-34	-98	106
46	142	-134
-12	-32	40
0	4	4
1003	3013	-3005

$(-34, -98)$, $(46, 142)$, $(-12, -32)$, $(0, 4)$ and $(1003, 3013)$ are ordered pairs on the graph of $y_1 = 3x + 4$.

$(-34, 106)$, $(46, -134)$, $(-12, 40)$, $(0, 4)$ and $(1003, -3005)$ are ordered pairs on the graph of $y_2 = -3x + 4$.

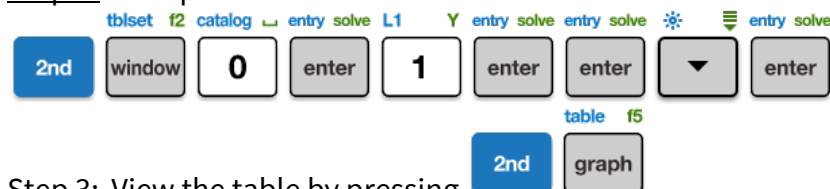
Use an automatic table to see y-values for two or more functions

Example 3: Create one table for $y_1 = 3x + 4$ and $y_2 = -3x + 4$ using the AUTO setup.

x	$y_1 = 3x + 4$	$y_2 = -3x + 4$
0		
1		
2		
3		
4		

Step 1: Input both equations into the Y= menu, same as in Example 2.

Step 2: Set up an automatic table. Set TblStart to 0 and ΔTbl to 1. Set Indpt to Auto and Depend as Auto.



Step 3: View the table by pressing

NORMAL FLOAT AUTO REAL RADIAN MP			NORMAL FLOAT AUTO REAL RADIAN MP			NORMAL FLOAT AUTO REAL RADIAN MP		
Plot1	Plot2	Plot3	TABLE SETUP			PRESS Δ FOR ΔTbl		
$Y_1=3X+4$			TblStart=0			X	Y1	Y2
$Y_2=-3X+4$			$\Delta Tbl=1$			0	4	4
$Y_3=$			Indent: Auto Ask			1	7	1
$Y_4=$			Depend: Auto Ask			2	10	-2
						3	13	-5
						4	16	-8
						5	19	-11
						6	22	-14

The ordered pairs for y_1 in this table are $(0, 7)$, $(1, 5)$, $(2, 3)$, $(3, 1)$, $(4, -1)$, $(5, -3)$, and $(6, -5)$. The ordered pairs for y_2 in this table are $(0, -4)$, $(1, -1)$, $(2, 2)$, $(3, 5)$, $(4, 8)$, $(5, 11)$, and $(6, 14)$.