Using One Table for Several Functions MathPrint View

Objectives:

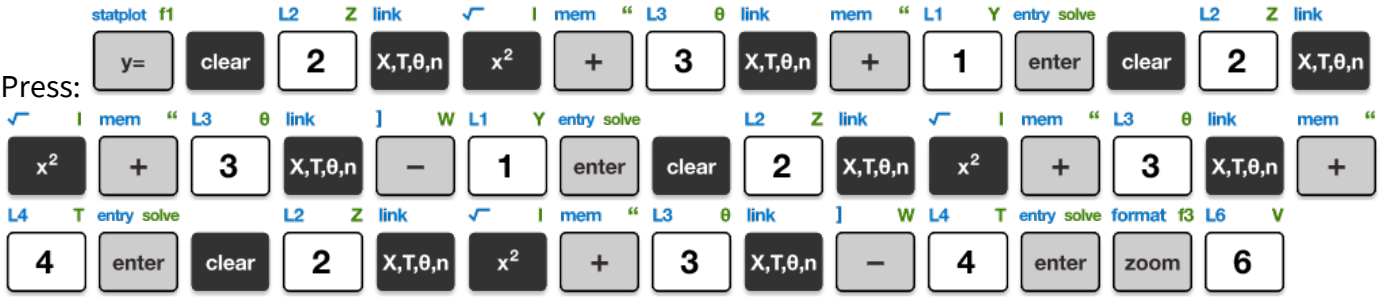
- Use and interpret an AUTO table with multiple columns
- Use and interpret an ASK table with multiple columns

Use and interpret an AUTO table with multiple columns

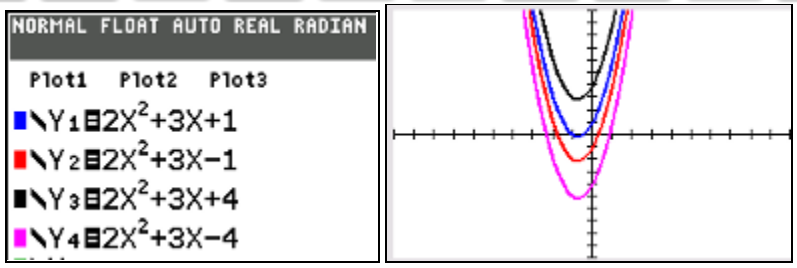
KEY CONCEPT: The functions in Y= menu are the same functions used for TABLE!

Example 1: Graph $f(x)=2x^2+3x+1$, $g(x)=2x^2+3x-1$, $h(x)=2x^2+3x+4$ and $k(x)=2x^2+3x-4$ together in the standard window.

Press:



See:

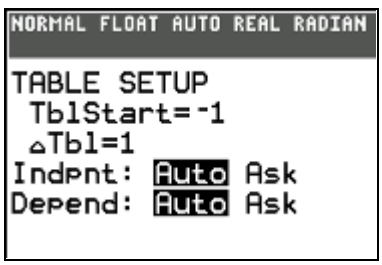


Example 2: Use an AUTOMATIC table to complete the following table of values for the functions in Example 1.

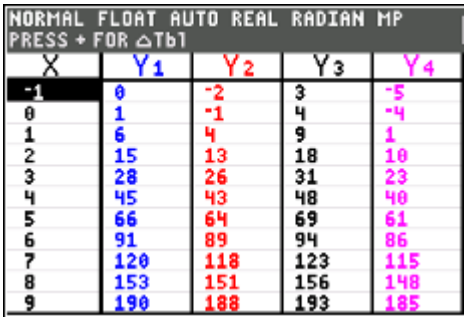
x	y_1	y_2	y_3	y_4
-1				
0				
1				
2				

To start an automatic table at -1 that advances by 1, press:

See:



To see the table, press: table f5 2nd graph and see:



PRO TIP: If you have y_5 or higher, use ▶ to move to those columns of the table.

Answer:

x	y_1	y_2	y_3	y_4
-1	0	-2	3	-5
0	1	-1	4	-4
1	6	4	9	1
2	15	13	18	10

Use and interpret an ASK table with multiple columns

Example 3: Complete an ASK table for $y_1 = 3x - 7$, $y_2 = -x^2 + 4$, $y_3 = x^3$, and $y_4 = -\frac{1}{6}x + 2$

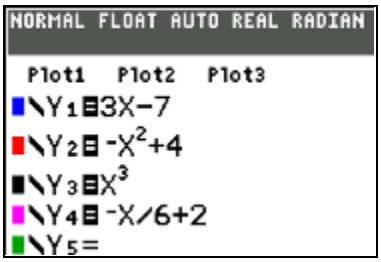
x	y_1	y_2	y_3	y_4
-1				
0				
7				

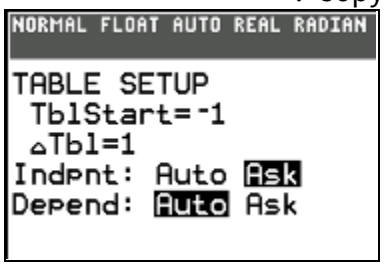
Solution: Input the four functions in Y=, then start an ASK table, in TBLSET, by changing only the Independent Variable to ASK, by pressing:

tblset f2 ☼ ▼ ☼ ▼ ▶ entry solve ☼ ▼ entry solve 2nd window ▼ ▼ ▶ enter ▼ enter table f5 2nd graph then press the x-values ans ? (–)

L1 Y entry solve catalog ␣ entry solve L2 Z entry solve u O entry solve 1 enter 0 enter 2 enter 7 enter. Copy two columns, then press ▶ four times.

See:





x	y_1	y_2	y_3	y_4
-1	-10	3	-1	$2.1\overline{6}$
0	7	4	0	2
7	14	-45	343	$8.\overline{3}$