

Using One Table for Several Functions Classic 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:

X	Y1	Y2
-1	0	-2
0	1	-1
1	6	4
2	15	13
3	28	26
4	45	43
5	66	64

Press + for ΔTbl

Copy the values for y_1 and y_2 , then press  four times to move past y_1 and y_2 to y_3 and y_4

X	y_3	y_4
-1	3	-5
0	4	-4
1	9	1
2	18	10
3	31	23
4	48	40
5	69	61

See: $y_4 = -5$ and complete the rest 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:

          then press the x-values 
         
       


 $\backslash Y_1 = 3X - 7$
 $\backslash Y_2 = -X^2 + 4$
 $\backslash Y_3 = X^3$
 $\backslash Y_4 = -X/6 + 2$
 $\backslash Y_5 =$
 $\backslash Y_6 =$
 $\backslash Y_7 =$

See:

TABLE SETUP
 TblStart=-1
 $\Delta Tbl=1$
 Indent: Auto 
 Depend:  Ask

x	y_1	y_2	y_3	y_4
-1	-10	3	-1	$2.\overline{16}$
0	7	4	0	2
7	14	-45	343	$8.\overline{3}$