

Using Tables with an “ASK” Independent Variable MathPrint View

Objectives:

- See the same table formatted horizontally and vertically
- Identify the three steps for using a TABLE
- Step 1: Use the Y= menu to define a function between x and y
- Step 2: Use the TBLSET Menu to Set Up an Empty “ASK” Table
- Step 3: View and use the resulting table using TABLE

See the same table formatted horizontally and vertically

Some math problems have horizontal tables, but the calculator always uses a vertical format.

Example 1: Hortense plans to purchase tools next month, during a sale when all tools will be discounted 35%. Use a calculator table to fill in the missing sale prices.

Horizontal format


Item	Hammer	Drill	Sander	Glue gun	Socket wrenches
Original Price	\$8.25	\$39.95	\$46.75	\$18.45	\$76.65
Sale price 35% off					



Vertical format



x	Y1
8.25	
39.95	
46.75	
18.45	
76.65	

Identify the three steps in using a TABLE

IMPORTANT: There are two types of tables in the calculator, ASK and AUTO, according to the table setup. In an ASK table, the calculator waits for the user to type the value(s) of x. In an AUTO table, the calculator automatically calculates values of x using rules the user sets up in TBLSET.

Step 1: Input a function in the  menu. The calculator needs a relationship between x and y.

Step 2: Configure the table (ASK or AUTO), using the TBLSET menu.  

Step 3: View the resulting table, using TABLE.  

Step 1: Use the Y= menu to define a function between x and y



Example 1, continued: Input the function $y = .65x$, where y is the sale price and x is the original price.

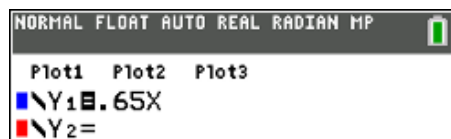
IMPORTANT: Always use the  when typing a variable into the Y= menu.



Press these buttons

CAUTION: The Y= menu allows more than one equation. If you have a calculator someone else used, there

may be other functions. If so, clear them by pressing  and  repeatedly.



See this screen:

CAUTION: Exit the Y= menu before typing other calculations on top or beside your intended function!



Exit by pressing

Step 2: Use the TBLSET menu to set up an empty “ASK” table

Example 1, continued: Set up an Ask table.



To open the TBLSET menu, press these buttons:

NOTE: In an ASK table, TblStart (“Table Start”) and Δ Tbl (“Delta Table”) are not used.



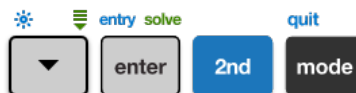
Press:

Vocabulary: When using a function $y(x)$, each value of x is chosen independently, so x is the **independent** variable. But y comes from or depends on the value of x , so y is the **dependent** variable.

To make the Independent Variable (x) “ASK”, press these buttons:



To make the Dependent Variable (y) “AUTO”, continue:



See a screen:

NOTE: The starting value (TblStart) and increment (triangle Tbl) weren’t used, and don’t have to match.

CAUTION: NEVER set the dependent variable to “Ask”. It doesn’t do what you would hope!

Step 3: View and Use the Resulting Table using TABLE

Example 1, continued: Find the sale price of each item to complete the table below. If necessary, round answers to the nearest penny. Include units. _____

[illegible]

To see the table, press:   See this screen:

NOTE: The table may be blank or have leftover numbers; either is okay.

Type each original price (x) into the Ask table. Press these buttons:

v P i : L2 Z L5 U entry solve L3 0 w Q i : w Q L5 U entry solve
 8 . 2 5 enter 3 9 . 9 5 enter
 L4 T L6 V i : u O L5 U entry solve L1 Y v P i : L4 T L5 U entry solve
 4 6 . 7 5 enter 1 8 . 4 5 enter
 u O L6 V i : L6 V L5 U entry solve
 7 6 . 6 5 enter

See this screen:

NORMAL FLOAT AUTO REAL RADIAN MP					
\times	Y_1				
8.25	5.3625				
39.95	25.968				
46.75	30.388				
18.45	11.993				
76.65	49.823				

Round each y_1 value to the nearest hundredth and complete the table:

Item	Hammer	Drill	Sander	Glue gun	Socket wrenches
Original Price	\$8.25	\$39.95	\$46.75	\$18.45	\$76.65
Sale price 35% off	\$5.36	\$25.97	\$30.39	\$11.99	\$49.82

Try It!

1) Use an ASK table to find the requested values of $y = \sqrt{x}$

x	0	1	4	9	16	196	441
y							

Answer

NORMAL FLOAT AUTO REAL RADI AN MP

Plot1 Plot2 Plot3

$Y_1 = \sqrt{x}$

$Y_2 =$

Step 1: $\mathbf{Y}_2 = \mathbf{Y}_1 - \mathbf{X}_1 \mathbf{b}_1$

Step 2: Same as Example 1.

NORMAL FLOAT AUTO REAL RADIAN MA			
X	Y1		
0	0		
1	1		
4	2		
9	3		
16	4		
196	14		
441	21		

Step 3:

Note: The numbers from Example 1 may have been in your table. That's okay. Just type in the new x-values, and the calculator puts the new numbers in by "over-writing".