



Graphing Calculator Investigation

A Preview of Lesson 8-2

Casio Algebra FX 2.0

Function Tables

You can use a Casio Algebra FX 2.0 graphing calculator to create function tables. By entering a function and the domain values, you can find the corresponding range values.

Use a function table to find the range of $y = 3n + 1$ if the domain is $\{-5, -2, 0, 0.5, 4\}$.

Step 1 Enter the function.

- The graphing calculator uses X for the domain values and Y for the range values. So, $Y = 3X + 1$ represents $y = 3n + 1$.
- Enter $Y = 3X + 1$ in the Y= list.

KEYSTROKES: **MENU** 3 3 **X,θ,T** **+** 1 **EXE**

Step 2 Find the range by entering the domain values into a table.

- Access the table.

KEYSTROKES: **F6** **F5**

- Enter the domain values.

KEYSTROKES: -5 **EXE** **▼** -2 **EXE** **▼** ...
4 **EXE**

The range is $\{-14, -5, 1, 2.5, 13\}$.

X	Y1
-5	-14
-2	-5
0	1
0.5	2.5

Exercises 1b. As X increases by 1 unit, Y decreases by 2 units.

Use the TABLE option on a graphing calculator to complete each exercise.

- Consider the function $f(x) = -2x + 4$ and the domain values $\{-2, -1, 0, 1, 2\}$.
 - Use a function table to find the range values. **{8, 6, 4, 2, 0}**
 - Describe the relationship between the X and Y values.
 - If X is less than -2 , would the value for Y be greater or less than 8? Explain. **See pp. 431A–431H.**
- Suppose you are using the formula $d = rt$ to find the distance d a car travels for the times t in hours given by $\{0, 1, 3.5, 10\}$.
 - If the rate is 60 miles per hour, what function should be entered in the Y= list? **$Y = 60X$**
 - Make a function table for the given domain. **See pp. 431A–431H.**
 - Between which two times in the domain does the car travel 150 miles? **1 h and 3.5 h**
 - Describe how a function table can be used to better estimate the time it takes to drive 150 miles. **See pp. 431A–431H.**
- Serena is buying one packet of pencils for \$1.50 and a number of fancy folders x for \$0.40 each. The total cost y is given by $y = 1.50 + 0.40x$.
 - Use a function table to find the total cost if Serena buys 1, 2, 3, 4, and 12 folders. **\$1.90, \$2.30, \$2.70, \$3.10, \$6.30**
 - Suppose plain folders cost \$0.25 each. Enter $y = 1.50 + 0.25x$ in the Y= list as Y2. How much does Serena save if she buys pencils and 12 plain folders rather than pencils and 12 fancy folders? **\$1.80**



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