

You can use a Casio FX-9750G graphing calculator to create function tables. If you enter a function and the domain values, the calculator will give you the corresponding range values.

ACTIVITY

Packages of batteries cost \$4 each at a store. Bridgett has a coupon for \$2 off her total purchase. Find the total cost y of buying x packages of batteries. Use a function table to find the range of $y = 4x - 2$ if the domain is $\{2, 5, 6, 8, 10\}$.

Clear the calculator memory first, select MEM from the Main Menu, \blacktriangledown Reset $\boxed{\text{F1}}$ $\boxed{\text{MENU}}$

Step 1 Enter the function.

- The graphing calculator uses x for the domain values and Y1 for the range values. So, $Y1 = 4x - 2$ represents $y = 4x - 2$.
- Access the Table function from the Main Menu screen.

KEYSTROKES: $\boxed{\text{MENU}}$ 7

- Enter $Y1 = 4x - 2$.

KEYSTROKES: 4 $\boxed{\text{X},\theta,\text{T}}$ $\boxed{-}$ 2 $\boxed{\text{EXE}}$

Step 2 Access the table.

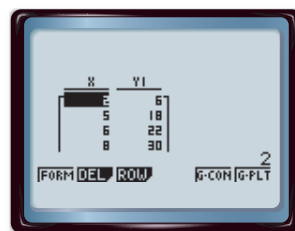
KEYSTROKES: $\boxed{\text{F6}}$ or $\boxed{\text{EXE}}$

Step 3 Find the range by entering the domain values.

- Enter the domain values given above under the X column.

KEYSTROKES:

2 $\boxed{\text{EXE}}$ \blacktriangledown 5 $\boxed{\text{EXE}}$ \blacktriangledown 6 $\boxed{\text{EXE}}$ \blacktriangledown 8 $\boxed{\text{EXE}}$
 \blacktriangledown 10 $\boxed{\text{EXE}}$



- The range values will appear in the Y1 column.
- Note the graph is a different representation of the same data.

KEYSTROKES: $\boxed{\text{F5}}$

- The Trace feature could be used to find domain and range values that were not requested.

KEYSTROKES: $\boxed{\text{F1}}$ and \blacktriangleleft or \blacktriangleright

Analyze the Results

Use the Table feature option on a Casio FX-9750G to complete each exercise.

- MULTIPLE REPRESENTATIONS** Suppose you are using the formula $d = rt$ to find the distance d a car travels for the times t in hours given by $\{0, 1, 3.5, 10\}$.
 - ALGEBRAIC** If the rate is 60 miles per hour, what function should be entered in Y1?
 - GRAPHICAL** Make a graph and function table for the given domain. Make sure to use an appropriate window.
 - NUMERICAL** Between which two times in the domain does the car travel 150 miles?
 - NUMERICAL** How many miles will the car have traveled after 12 hours?
 - VERBAL** Describe how a function table and graph can be used to estimate the time it takes to drive 150 miles.