Activity 3:
Exploring Functions and Corresponding Tables of Values

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CALCULATOR: Casio: *fx-115ES*

Teaching Notes and Solutions

Objective: Students will demonstrate the ability to input a function, generate a table of values, and interpret those values.

Getting Started:

This activity reinforces the concepts of functions. Understanding the properties of linear, quadratic, and absolute value functions is essential to mastering Algebra. Students should be able to graph these functions on a coordinate plane, generate a table of values, and interpret those values.

While the Casio *fx-115ES* does not generate a visual representation of the graph, it does provide a table of values that can be easily used to interpret the results of any function. Once functions are transferred to various problem-solving scenarios, integrating this technology can be an extremely useful tool in the solving and analyzing process.

Answers:

1.

X	F(X)=250 • 0.0125 • X
1	3.125
2	6.25
3	9.375
4	12.5
5	15.625
6	18.75
7	21.875
8	25
9	28.125
10	31.25

2.

X	$F(X)=\pi \bullet X^2$
2	12.566
4	50.265
6	113.09
8	201.06
10	314.15

3.

X	$F(X)= X^2 + 6X + 8$
15	329
16	360
17	399
18	440
19	483
20	528
21	575
22	624

4.

X	$F(X)=x^2–9$
-5	16
-4	7
-3	0
-2	-5
-1	-8
0	-9
1	-8
2	-5
3	0
4	7
5	16

Name _____ **Date** _____

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Student Worksheet Activity 3

Problems:

For each of the following problems, create a function, enter it into the Casio *fx-115ES*, and generate a table of values to help you solve the problems.

1. You have opened a savings account at a local bank that gives you simple interest on your money. Based on the formula, I = Principal X Rate X Time, you are trying to determine how much interest you will generate over the next ten years. If you open the savings account with $250 and the money will earn 1.25% per year, how much interest will you earn each year for the next ten years?

2. Determine the area of a circle whose radius ranges from 2cm – 10cm. Use a step increment of 2cm. Generate a table of values to determine your answers.

3. Create a table of values for the function, f(x) = x2 + 6x + 8, where 15 < x < 22.

4. Given the function, f(x) = x2 - 9, evaluate the function where -5 < X < 5.

Extension:

Write a linear function that models a business scenario where you earn a certain amount of money per job and must deduct some type of expense. Create a table of values that will show how much money you will profit after completing a certain number of jobs.

Calculator Notes:

To Enter a Function and Create a Table of Values:

- Press **MODE** .
- Press **7** for TABLE.
- Enter the function after f(x) =.
- Press **=** .
- Set a Start Value.
- Press **=** .
- Set an End Value.
- Press **=** .
- Set a Step Value.
- Press **=** .