Trigonometry

Section P-5 (Part 4): Functions

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**:

* Students will be able to write and analyze functions that represent real world situations.
* Students will be able to evaluate a difference quotient.

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| **Main Idea** | **Notes** |
| **Example 1: Writing a Distance Function**    **Example 2: The Dimensions of a Container**  **Example 3: Evaluating a Difference Quotient** | Suppose a car travels at 70 miles per hour. Let *y* be the distance the car travels in *x* hours.    Write the formula that would represent your total distance in terms of time.  Does this formula represent a function? Explain  Rewrite the equation in function notation.  What is f(3)? Interpret this output in the context of this problem.  Let’s pretend that you work in the marketing department of a soft drink company. You are experimenting with a new soft-drink can that is slightly narrower and taller than a standard can.  For your experimental can, the ratio of the height to the radius is 4. Label the can below.     1. Express the volume of the can as a function of the radius *r* 2. Express the volume of the can as a function of the height *h*   *For f(x) = x² - 4x + 7, find .* |
| **Homework:** |  |