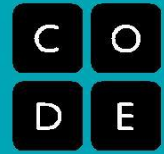


# The Design Recipe

Code.org Computer Science in Algebra



**Description:** Your family is driving on I-80 through Nebraska. You will be staying in a great motel with a pool that has a slide when you arrive in Cheyenne, Wyoming. You have just left Lincoln, Nebraska which is 420 miles from the motel in Cheyenne, Wyoming. You are traveling at an average speed of 70 miles per hour.

## Contract and Purpose Statement

Every contract has three parts...

miles-to-go : \_\_\_\_\_ -> \_\_\_\_\_  
 function name domain range

what does the function do?

## Examples

Write some examples for your function in action...

**Example:** miles-to-go ( 0 ) = \_\_\_\_\_  
 function name input(s) what the function produces

**Example:** miles-to-go ( 1 ) = \_\_\_\_\_  
 function name input(s) what the function produces

**Example:** miles-to-go ( 6 ) = \_\_\_\_\_  
 function name input(s) what the function produces

## Definition

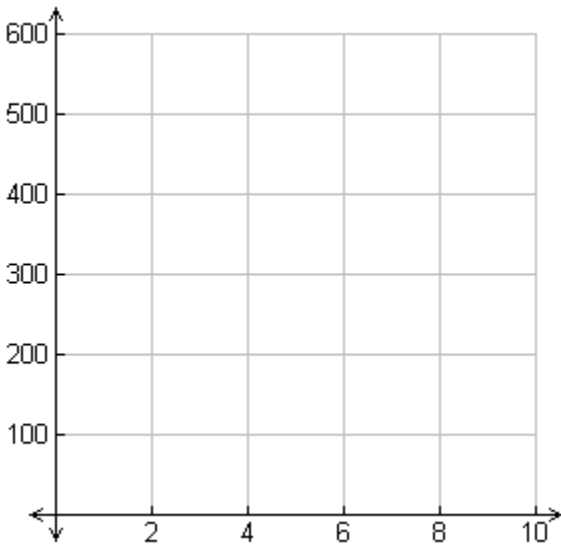
Write the definition, giving variable names to all your input values

**Define:** miles-to-go ( \_\_\_\_\_ ) = \_\_\_\_\_  
 function name variables what the function does with those variables

1. How long will it take for you to be 100 miles from the pool with the slide?
2. What is the constant rate of change in this situation?
3. Set up a table for this situation

<b>Hours</b>							
<b>Distance to the pool</b>							

4. Graph this situation. Label the axes correctly.
  - a. Identify the y – intercept.



- b. What does the y – intercept mean in the context of this situation?
- c. Identify the x – intercept.
- d. What does the x – intercept mean in the context of this situation?
- e. What is the domain and range of this situation?

5. Assume you are 600 miles from the pool with the slide when you start. Change the table and the graph your new line in a different color.

<b>Hours</b>							
<b>Distance to the pool</b>							

- a. Write a function that models the data.
- b. What is the domain and range of this situation?