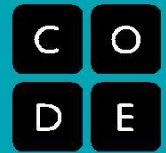Name: _____ Date: _____ Per: _____

The Design Recipe
Code.org Computer Science in Algebra

C O
D E

Description: You are filling your swimming pool with water. The pool holds 15,000 gallons of water and you can put in 1,000 gallons of water per hour. When you start filling the pool it already has 6,000 gallons of water in it from last year.

Contract and Purpose Statement

Every contract has three parts...

_____pool_____ : _____ -> _____
      function name   domain   range

_____
what does the function do?

Examples

Write some examples for your function in action...

Example: _____pool_____ (_____0_____) = _____
           function name   input(s)   what the function produces

Example: _____pool_____ (_____3_____) = _____
           function name   input(s)   what the function produces

Example: _____pool_____ (_____6.5_____) = _____
           function name   input(s)   what the function produces

Definition

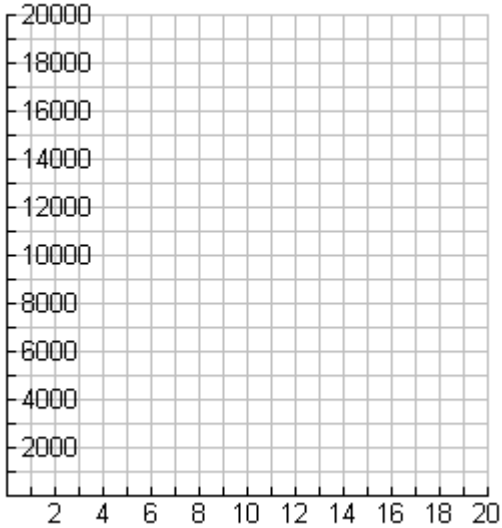*Write the definition, giving variable names to all your input values*

Define: _____pool_____ (_____) = _____
           function name   variables   what the function does with those variables

E. What is the constant rate of change in this situation? Why?

F. Set up a table for this situation

Hours	Gallons

G. Graph this situation. Label the axes correctly. Write a function that models the data.

Identify the y – intercept. What does it mean in the context of this situation?

Identify the x – intercept. What does it mean in the context of this situation?

What is the domain and range of this situation? Why?

H. If it costs you $0.02 per gallon of water, how much does it cost to fill the pool?