Functions Activity

Scratch allows you to create custom functions. These can be used to simplify your code and exploit repeating patterns. In this activity, we’re going to create our own functions to solve simple problems.

In particular, notice that:

* For every function we create in scratch, we need to define the input and the output
* A function helps us hide details from the called (abstraction

Assignment:

For each of the following problems, create a function to solve it. Each time you complete a task, **move the code into the “backpack”**, and then start a new piece of code.

* 1. Create a function that takes a size as an input and then creates a triangle of that size. Test it in a program to make sure it works.
  2. Create a function that takes a size as an input and then creates a pentagon of that size. Test it in a program to make sure it works.
  3. Make a function that takes a number as an input and then prints out the square of that number. For example, an input of 5 should result in the number 25 being printed. Test it in a program to make sure it works.
  4. A drawing of a house

     Description automatically generatedMake a function that takes a size as an input and then draws a simple house of that size. Test it in a program to make sure it works.
  5. Create a program that draws a triangle AND at each corner of the triangle, draws a house (using the function from problem five).
  6. Create a function that takes a size and a number of sides as inputs and then creates a polygon of that size and shape (hint: look at how the number of sides relate to the degree turn in problems one and two). Test it in a program to make sure it works.
  7. (Bonus): Create a program that uses a loop, a variable, and the function from problem six to create the following shape:

A blue line drawing of a hexagon shape

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