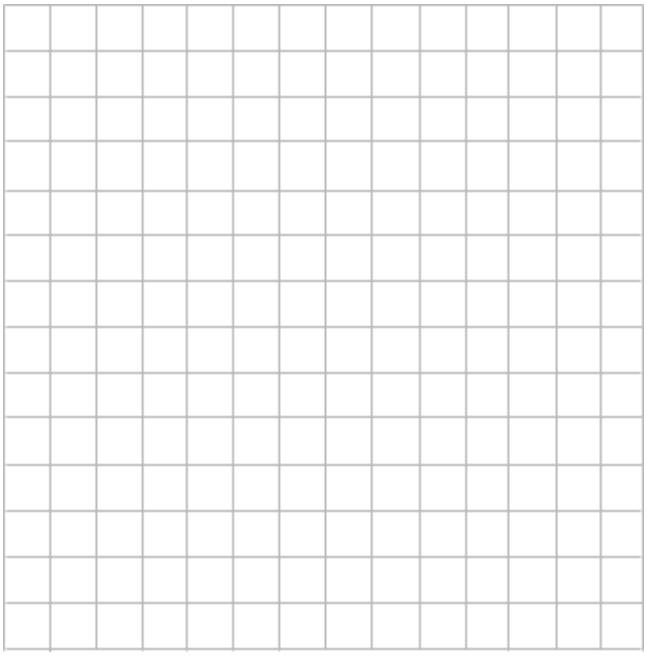
Name(s)_____ Period _____ Date _____

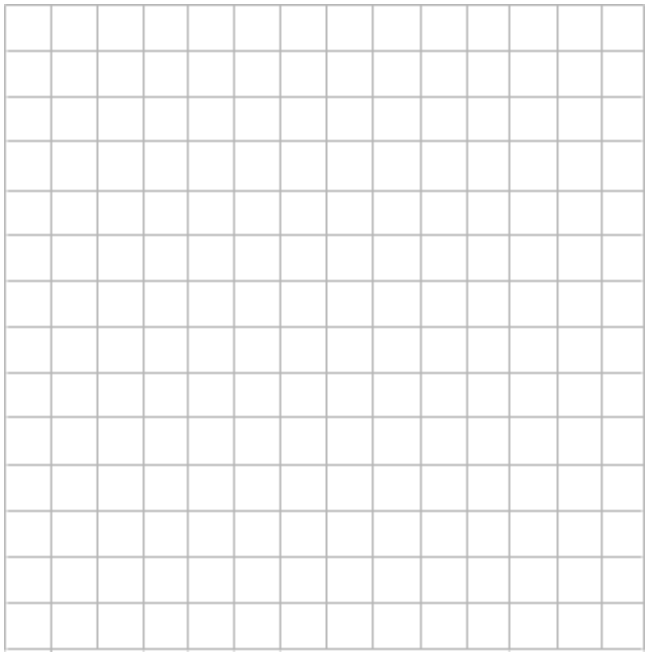
Activity Guide - Function Houses

Instructions:

Challenge #1: Time to create your own function with parameters!

- Create a function envelope. Put the name of the function on the envelope.
- On a scrap piece of paper, write your function. It can be written in pseudocode. Describe how to draw a simple house on graph paper.
  - Think about the parameters. How could your function be used to draw different types or sizes of houses? Give each parameter a unique name.
  - You can have as many parameters as you want. When the parameter is referenced in the function, put a box around it to draw attention.
  - Put the function inside the envelope.
- Turn to the front of the envelope. Put boxes on the envelope for each parameter and put the name of the parameter in the box.
- Choose arguments for each parameter. Write them on small sticky notes and stick them in the correct boxes on the envelope.
- Pass the envelope to a partner. The partner will draw the house following the instructions in the function, using the parameters.
- Once they've finished, check to see if the drawing is as expected.
- Choose new arguments. Replace the old ones on the envelope with the new ones and "call" the function again by passing it to a partner. The partner then draws the new house.





Challenge #2: Create a cost calculator function for building the house you created a function for earlier.

- Create a function envelope. Put the name of the function on the envelope.
- On a scrap piece of paper, write your function. It can be written in pseudocode. Create a cost calculator.
    - Think about the parameters. How would these impact the cost?
    - Add a return at the end of your function that returns the total cost.
- Turn to the front of the envelope. Put boxes on the envelope for each parameter and put the name of the parameter in the box.
- Choose arguments for each parameter. Write them on small sticky notes and stick them in the correct boxes on the envelope.
- Pass the envelope to a partner. The partner will calculate the cost of building the house using the parameters.
- Once they've finished, the partner should pass back or **return** a sticky note with the value of the total cost.
- Then choose new arguments. Replace the old ones on the envelope with the new ones and "call" the function again by passing it to a partner. The partner will now run the calculations again and complete the **return**. Partners should check to see if the **return** value is correct!