PART 1: SIMULATING RELATIONSHIPS

💬= turn and talk. Stop and share your responses with your partner. If you have different responses, try to come to a consensus.

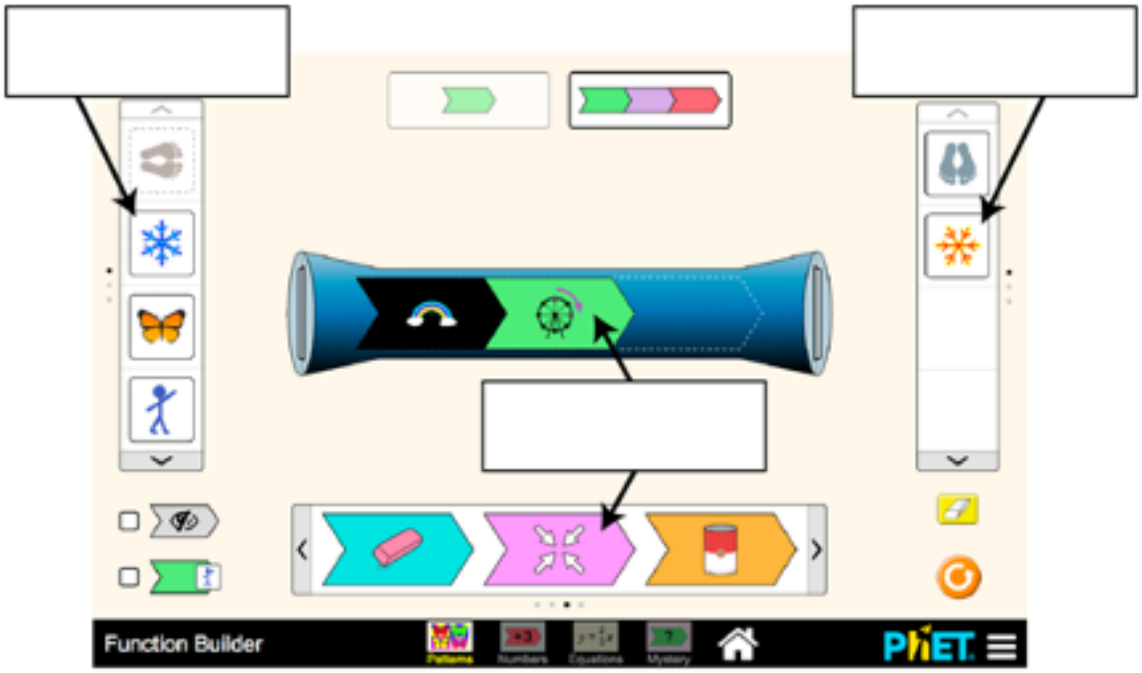
1. Play with Function Builder for 5 minutes. Write down three things you notice or have questions about.
    a.

    b.

    c.

PART 2: WHAT IS A FUNCTION?

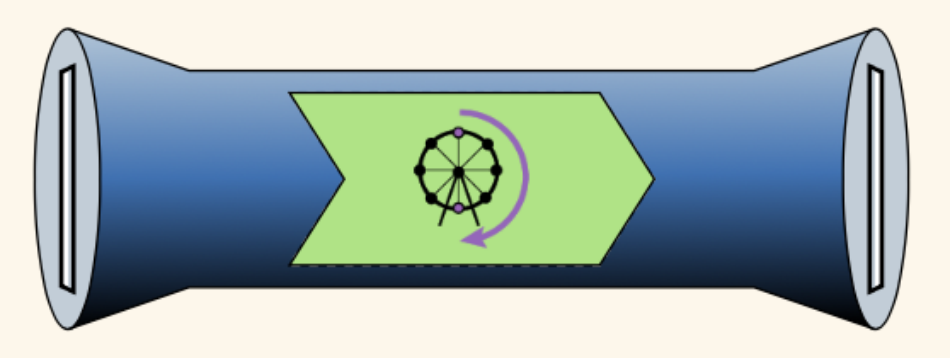
2. Come up with your own names for these parts of a function:



3. Share your labels with your group. Describe the similarities below. 💬

4. The blue “builder” in the middle of the screen is a function. Describe what a function is using the labels you’ve agreed on as a class. 💬

5. Suppose you build this function:



   a. Complete the following table, sketching what happens after going through the function.

🍒	
♥	
☑️	
🙂	
🐞	
➕	

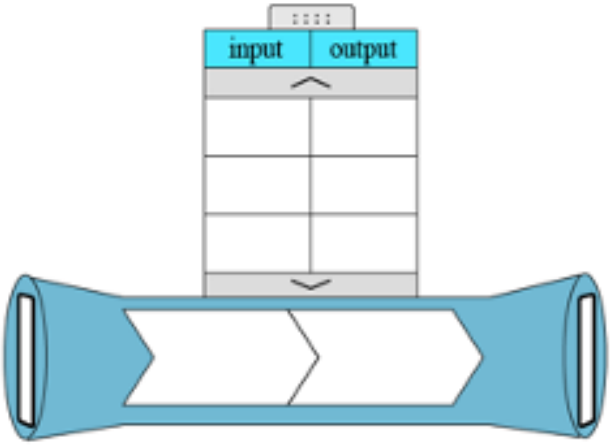
   b. Write a rule that describes what the function does. Compare with your group.💬

PART 3: DIFFERENT KINDS OF FUNCTIONS

NUMBERS SCREEN

1. Build a function. Fill in the function builder and table.

2. What is the output when the input is 10? Switch papers with a teammate and check that you found the correct output. 💬

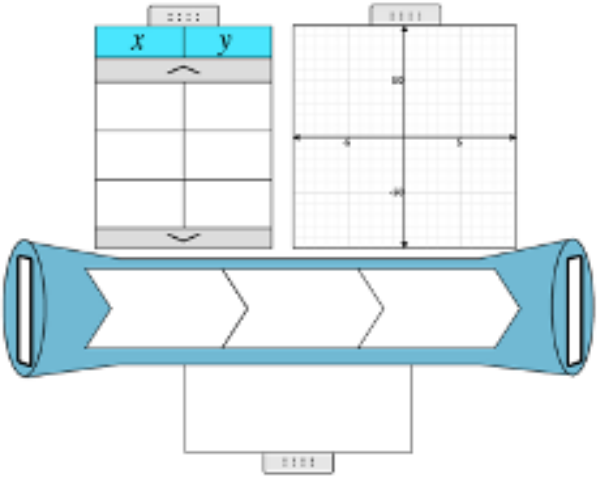


3. Describe how to find the output for your function if given any input. **Challenge yourself to describe in multiple ways**.

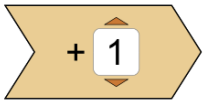
EQUATIONS SCREEN

4. Build a custom function. Fill in the function builder and representations.

5. What is *y* when *x* is 100?



6. Manipulate your function in different ways. Describe the effects on the table, graph, and equation that each of your actions has.

Action	Effect on table	Effect on graph	Effect on equation
Click the up arrow on the addition operation 			

7. What does your graph look like? What other graphs can you make? 💬

8. In general,
    a. how does the addition operation impact the graph of your function?

    b. how does the subtraction operation impact the graph?

    c. how does the multiplication operation impact the graph?

    d. how does the division operation impact the graph?