

Equivalent Expressions Exploration

Learning Goals:

- Students will identify like terms and combine them to simplify expressions.
- Students will identify and create equivalent expressions.

Part 1: Like Terms

- 1) Build an expression using at least 5 coins. How does the expression compare to the coins in the **My Collection** box? Draw a sketch of each.



Expression

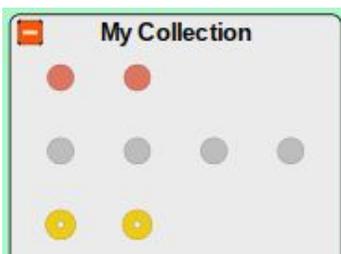
- 2) What are the coefficients? 3) Are there any like terms? How do you know?



Do not go on to Part 2. Finished early? Look at slide for suggestions.

Part 2: Making Equivalent Expressions.

Use the sim to create a **My Collection** box with the following coins.



- 4) What are two different ways to write an expression from the coins in the box?

5) Stop and compare with your partner to see if you got the same expressions. **Write down** any expressions that your partner had that you did not.

- 6) **On the Sim:** Toggle the switch from the coin to the x and build the following collection.



- 7) What are two different ways to write an expression from the variables in the box?

8) Build the following collection.



9) What are two different ways to write an expression from the variables in the box?

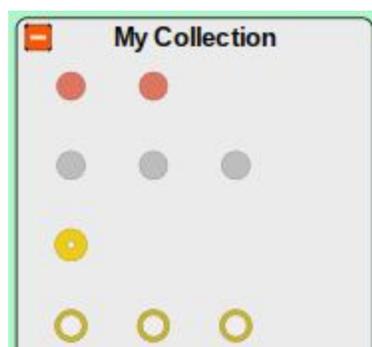
10) Stop and compare with your partner.

11) Go to the game tab at the bottom of the screen and play levels 1 - 4.



Do not go on to Part 3. Finished early? Look at slide for suggestions.

Part 3: What is Simplest Form?



12) Toggle back from x to coins. Build the following **My Collection** Box

13) Create an algebraic expression from the coins that you think is "**the simplest.**" Draw it in the box below.

14) Trade with your partner to see if you agree. If you have the same answer, come up with 2 reasons **why** it is the simplest. If you have different answers, see if you can agree on what is the simplest form.



15) Toggle from coins to x. Build the following **My Collection** Box

16) Based on your discussion with your partner, create an algebraic expression from the coins that you think is "**the simplest.**" Draw it in the box below.