Name: _____ Date: _____ Class: _____

GENERATING EQUIVALENT EXPRESSIONS

💬 = 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 the sim for 5 minutes. Write down three questions or observations that you have.

2 Check the "all coefficients" checkbox ☑ all coefficients and play with the sim. How would you describe a **coefficient**? 💬

A coefficient is…

3 How do you change a coefficient? 💬

4 3, z, and $-2x^2$ are all **terms**. Use the sim to build three more examples of **terms** and share them below. How would you describe a **term**? 💬

1) 2) 3)

A term is…

5 When you overlap two terms, sometimes the sim shows a yellow glow. What is happening?

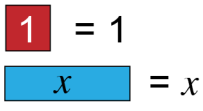
6 When you overlap two terms, sometimes you *can't* get a yellow glow. What is happening?

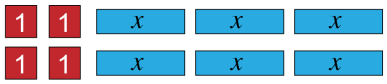
7 $x^2 - 2x^2 + y$ is an **expression**. Create an equivalent expression and confirm using the sim ($x^2 - 2x^2 + y$).

8 Write an **equivalent expression** for each of the following and justify why they are equivalent by drawing algebra tiles, evaluating, or explaining:

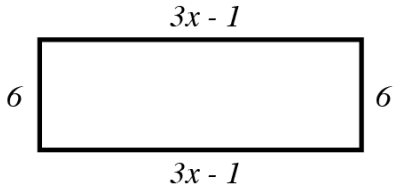
Expression	Equivalent Expression	Justify why they are equivalent
a. $7x^4 - 5x^4$		
b. $6b + 7b - 10$		
c. $-2(m + 5)$		
d. $y + 4 + 3(y + 2)$		

9 Write two equivalent expressions to represent these algebra tiles:



	Expression #1	Expression #2
		

10 Write an expression for the perimeter of this shape and **simplify** it.



11 Play the game! Be sure to try levels 7-8!