

Name: _____

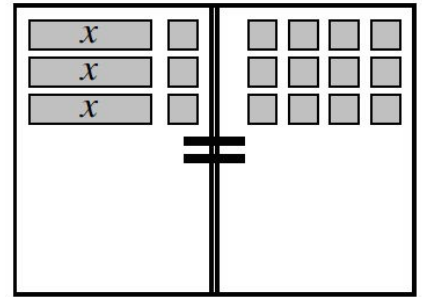
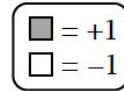
Date: _____ Per: _____

Lesson 6.2.1 Homework

6-54. Consider the Equation Mat at right.

a. Write the original equation represented.

b. Simplify the tiles on the mat as much as possible. What value of x will make the two expressions equal?



6-55. When Lakeesha solved the equation $3(x + 1) = 12$ from problem 6-54, she reasoned this way:

"Since 3 groups of $(x + 1)$ equals 3 groups of 4, then I know that each group of $(x + 1)$ must equal 4."

a. Do you agree with her reasoning? Explain.

b. How can the result of Lakeesha's reasoning be written?

c. Verify that your answer from problem 6-54 will make the equation you wrote in part (b) true.

6-56. In problems 6-54 and 6-55, $3(x + 1)$ could also be written as $3x + 3$ by using the Distributive Property. The expression $3(x + 1)$ is a product, while $3x + 3$ is a sum. For each expression below, write an equivalent expression that is a product instead of a sum. This process of writing an expression in the form of factors (multiplication) is called **factoring**.

a. $75x - 50$

b. $32x^2 + 48x$

c. $-40m - 30$

d. $63m^2 - 54m$

6-57. Evaluate the expression $5 + (-3x)$ for the given x -values.

a. $x = 3$

b. $x = \frac{1}{3}$

c. $x = -3$

6-58. Which fractions below are equivalent? Explain how you know.

a. $\frac{20}{5}$

b. $\frac{-20}{5}$

c. $\frac{20}{-5}$

d. $\frac{-20}{-5}$

e. $-\frac{20}{5}$

6-59. Simplify each expression.

a. $8.4(7x - 4) + 3.9$

b. $\frac{1}{4} + \frac{4}{5} \left(\frac{3}{4}x - 1\frac{1}{9} \right)$