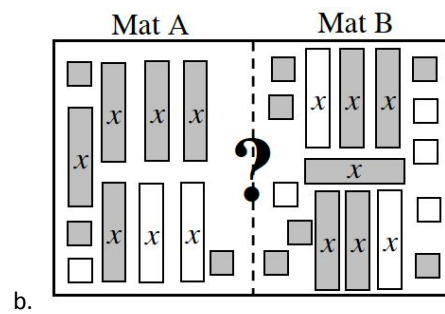
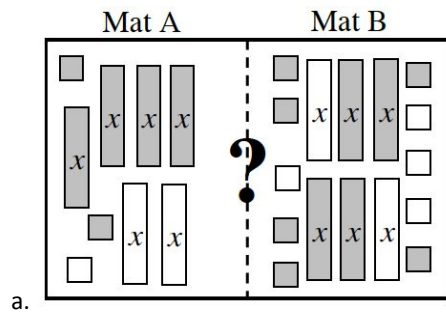


Name: \_\_\_\_\_

Date: \_\_\_\_\_ Per: \_\_\_\_\_

Lesson 6.1.2 Homework

**6-17.** Write an algebraic expression for each mat below. Then use the legal moves that you have developed to simplify each mat. If possible, decide which expression is greater.



**6-18.** When solving a problem about the perimeter of a rectangle using the 5-D Process, Herman built the expression below.

Perimeter =  $x + x + 4x + 4x$  feet

- Draw a rectangle and label its sides based on Herman's expression.
- What is the relationship between the base and height of Herman's rectangle? How can you tell?
- If the perimeter of the rectangle is 60 feet, how long are the base and height of Herman's rectangle? Show how you know.

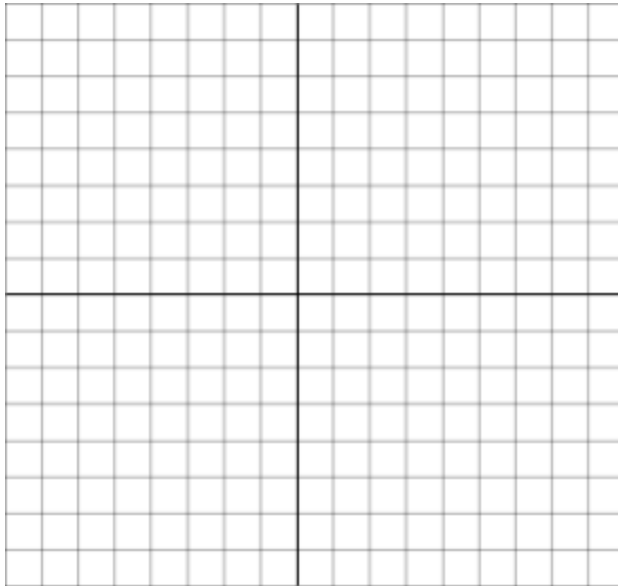
**6-19.** Evaluate the expressions below.

- $5^2 \cdot (-3) - 4 \cdot 6 + 7$
- $-3 \cdot (6 + 4 \cdot 2)$
- $9 + 8 \div (-4) - 12$
- $2^3 - 3 \cdot 4 + 6(-1 + 2)$
- $4 + (3 + 4)^2$
- $\frac{8-13}{10}$

**6-20.** Write the following expressions in two ways, one with parentheses and one without. For example,  $4(x - 3)$  can be written  $4x - 12$ .

- a. A number reduced by 3, then multiplied by 2.
- b. A number increased by 7, then multiplied by 5.
- c. Ten times a number, then add twenty.

**6-21.** Graph these points on a coordinate grid:  $A(-2, 0)$ ,  $B(0, 4)$ ,  $C(4, 1)$ ,  $D(2, -3)$ . Connect the points in order, with point  $D$  connected to point  $A$ . What shape have you created?



**6-22.** Alan was paying a dinner check, but he was not sure how much he should tip for his bill of \$27.38. If a 15% tip is standard, about how much should Alan leave for the server?