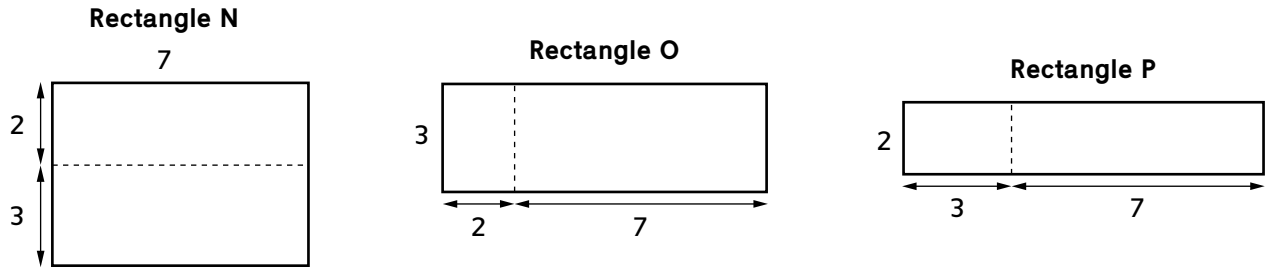
Representing the Distributive Property

Lesson 4-6

DATE TIME

Math Message

1 **a.** Find the areas of Rectangles N, O, and P.



Area: 35 square units Area: 27 square units Area: 20 square units

b. Each expression below represents the area of Rectangle N, Rectangle O, or Rectangle P. Record the letter of the rectangle that corresponds to each expression.

$(2 * 3) + (7 * 3)$ O

$(2 * 3) + (2 * 7)$ P

$(7 * 2) + (7 * 3)$ N

$3 * (2 + 7)$ O

$2 * (3 + 7)$ P

$7 * (2 + 3)$ N

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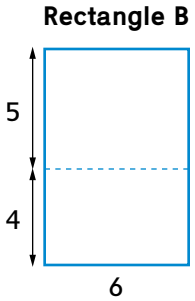
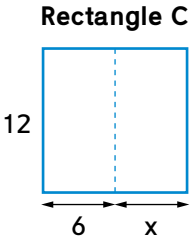
2 Write two equations to represent the area of Rectangle B.

6 * (5 + 4) = 54

(6 * 5) + (6 * 4) = 54



3 The area of Rectangle C is 144 square units.



a. Write two equations to represent the area of Rectangle C.

12 * (6 + x) = 144

(12 * 6) + (12 * x) = 144

b. What is the value of x? 6

6.NS.4, 6.EE.2, 6.EE.2b, 6.EE.2c, 6.EE.3, 6.G.1, SMP2, SMP7, SMP8

Representing the Distributive Property (continued)

Lesson 4-6

DATE TIME

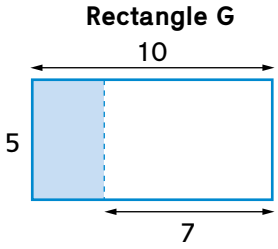
4 **a.** What is the area of the shaded part of Rectangle G? 15 square units

b. Different expressions can represent the area of the shaded part of Rectangle G.

Write two different expressions for finding the area of the shaded part of Rectangle G. Use the patterns you noticed in adding areas to help you figure out the expressions.

5 * (10 − 7)

(5 * 10) − (5 * 7)



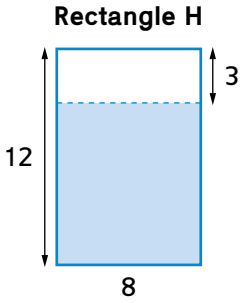
c. Check your answers by evaluating the expressions. Sample answer: 5 * (10 − 7) = 15 and (5 * 10) − (5 * 7) = 15 Because 15 = 15, both expressions work.

Use the Distributive Property to complete Problems 5–6.

5 Write two equations to represent the area of the shaded part of Rectangle H.

8 * (12 − 3) = 72

(8 * 12) − (8 * 3) = 72



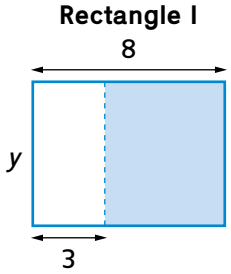
6 The area of the shaded part in Rectangle I is 30 square units.

a. Write two equations to represent the area of the shaded part of Rectangle I.

(8 − 3) * y = 30

(8 * y) − (3 * y) = 30

b. What is the value of y? 6



7 Describe how the Distributive Property works similarly over subtraction and addition.

Sample answer: You distribute the factor over everything inside the parentheses for both operations.

6.NS.4, 6.EE.2, 6.EE.2b, 6.EE.3, 6.G.1, SMP2, SMP7, SMP8