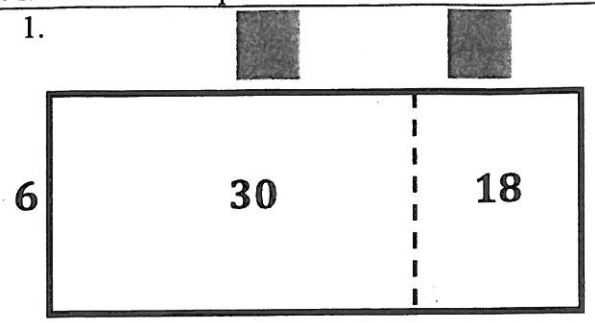
0.2d Homework: The Distributive Property

Name the factor, product, or addend that is missing from the area model. Then write a mathematical equation that shows the multiplication that the area model represents. Models are not drawn to scale.

1.



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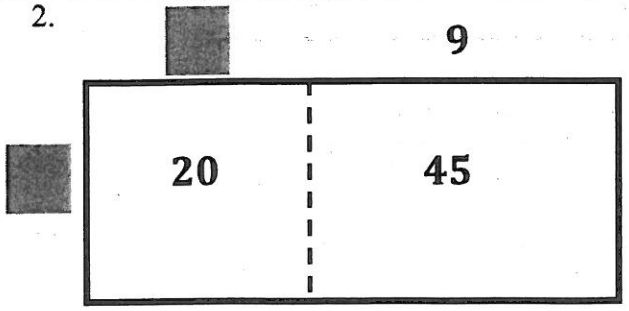

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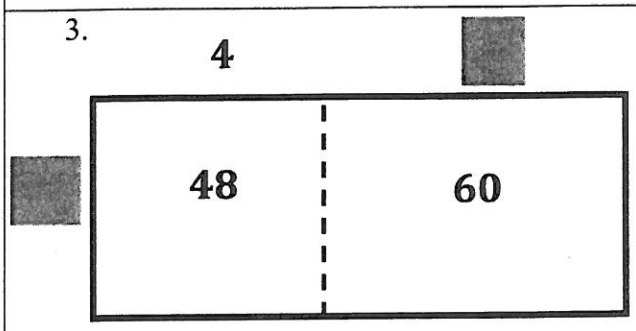

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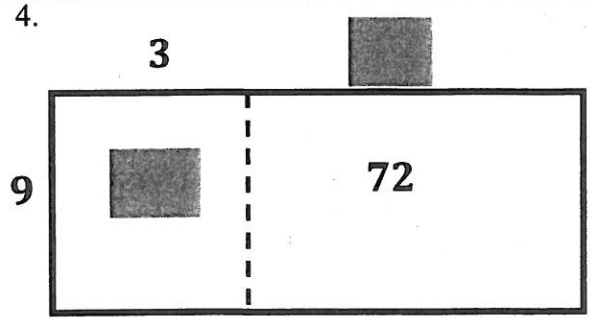

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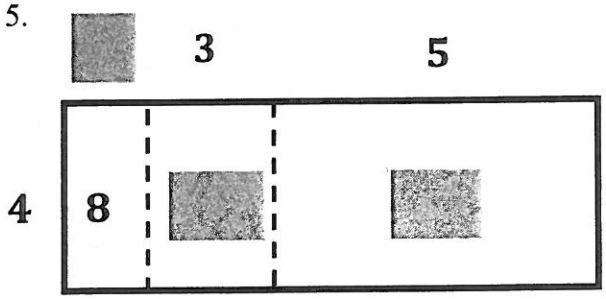

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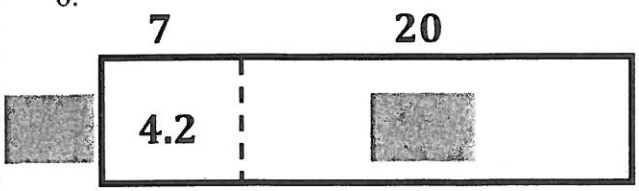

7. Circle all the expression that are equivalent to $12 + 30$

$5(2+6)$	$2(6+15)$	$1(12+30)$	$10(2+3)$
$6(2+5)$	$10(2+3)$	$4(3+8)$	$3(4+10)$

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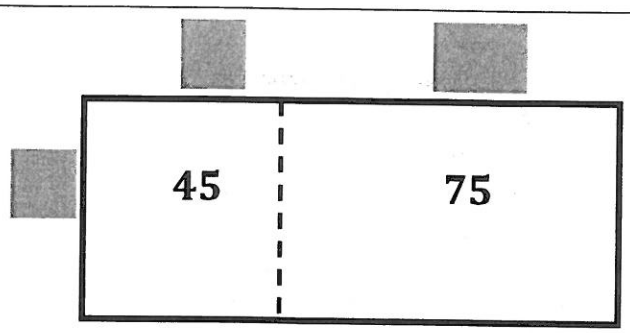
Directions: Find the missing numbers for the area problem below. List all possible combinations and write a mathematical sentence for each combination.

8.



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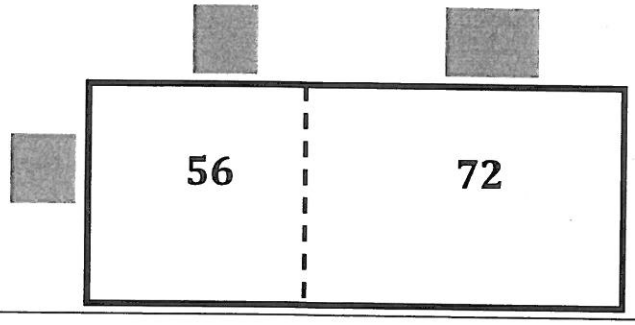

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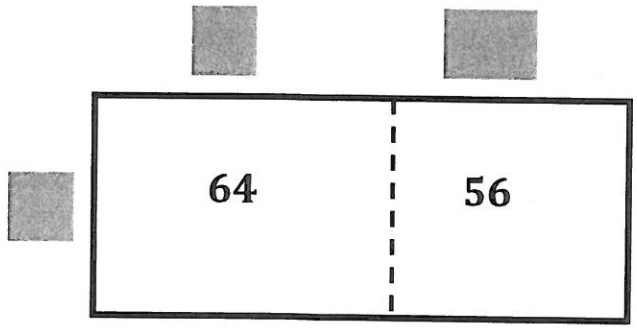

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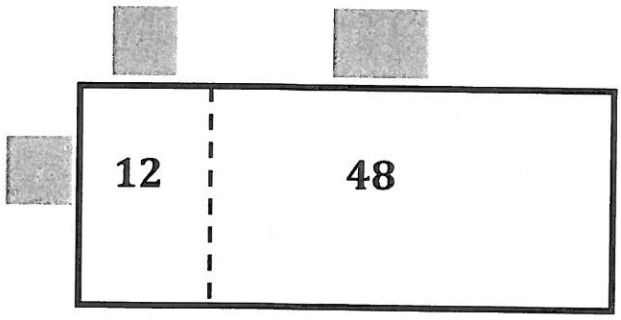
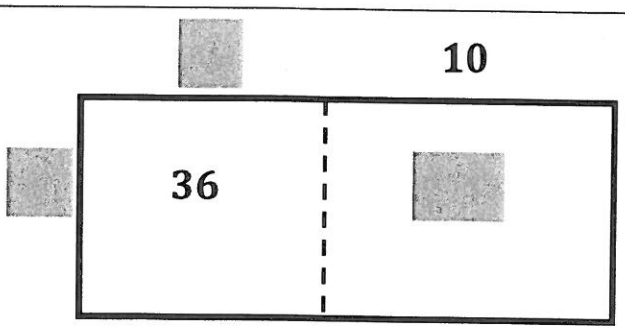


12.



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0.2e Class Activity: Using the Distributive Property To Find Equivalent Expressions

1. Use the distributive property to write all the equivalent expressions for the sum of $(36 + 12)$. If needed draw a model to reference.

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2. Use the distributive property to find all the equivalent expressions for $24 + 32$

3. Examine the equivalent expressions for the sum in number 2 above. Circle the expression that contains a factor that is the GCF of 24 and 32? What is the other factor in this product? How does this factor partner differ from the other factor partners in the other equivalent expressions?

4. Examine the equivalent expressions for the sum in number 1 as well. Which expression contains a factor that is the GCF of 36 and 12? How does its factor partner differ from the other factor partners in the other equivalent expressions?

5. Use the distributive property to find all the equivalent expressions for each sum given. Circle the expression that contains a factor that is the GCF of the two addends in the original sum. Check and see if this expression follows the same principle as the expressions with the GCF from numbers 1 and 2 above.

a. $45 + 60$	b. $42 + 70$	c. $20 + 60$

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6. Find the GCF of the two numbers in each given sum. Use the distributive property to write an equivalent expression to the sum that contains the GCF as one of its factors. How do you know that you found the correct equivalent expression?

a. $42 + 14$	b. $36 + 27$
c. $55 + 44$	d. $16 + 72$

7. Nina was finding multiples of 6. She states,

"18 and 42 are both multiples of 6, and when I add them, I also get a multiple of 6."

$$18 + 42 = 60$$

Explain to Nina why adding two multiples of 6 will always result in another multiple of 6.

This is an Illustrative Mathematics Task

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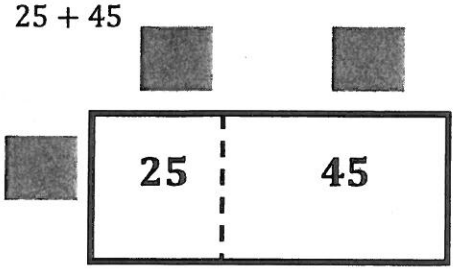
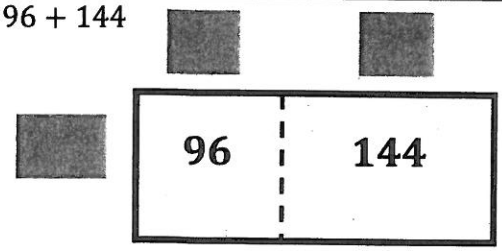
0.2e Homework: Using the Distributive Property To Find Equivalent Expressions

Directions: Use the distributive property and the GCF to write an equivalent expression for each given sum.

1. List the factors of 24:	2. List the factors of 42:
List the factors of 60: What is the GCF of 24 and 60: Use the GCF to write an equivalent expression for $24 + 60$	List the factors of 49: What is the GCF of 42 and 49: Use the GCF to write an equivalent expression for $42 + 49$
3. $25 + 45$  	4. $96 + 144$ 
5. $16 + 36$	6. $54 + 81$
7. $72 + 32$	8. $34 + 17$
9. $35 + 75$	10. $13 + 15$

11. Create your own example that uses the distributive property to rewrite a sum as an equivalent expression using the GCF. Choose numbers for a, b, and n, where n is the GCF of a and b.

$$a + b = n(a) + n(b) = n(a + b).$$

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