

## DISTRIBUTING A NEGATIVE NUMBER

A negative sign indicates the \_\_\_\_\_ of the number.

List the opposite of each of the terms below.

8

-5

x

-3x

1

-9x

### DISTRIBUTING A NEGATIVE

- When distributing a negative number, you are multiplying each term within the parentheses by the negative number outside the parentheses.
- This results in finding the \_\_\_\_\_ of each term within the parentheses.

Ex:  $-3(2 + 4x) =$  \_\_\_\_\_

In 1-8, practice simplifying the expression by distributing the negative number.

1. $-2(g + 5)$	2. $-2(-g + 5)$	3. $-2(g - 5)$	4. $-2(-g - 5)$
5. $-3(4a + 2)$	6. $-3(-4a + 2)$	7. $-3(4a - 2)$	8. $-3(-4a - 2)$

What do you notice about questions 1-8 above?

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What mistakes might be made when distributing a negative?

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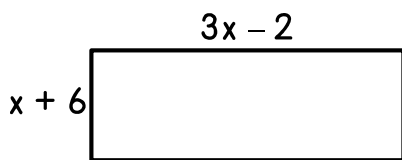
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In 9-14, simplify the expressions by distributing.

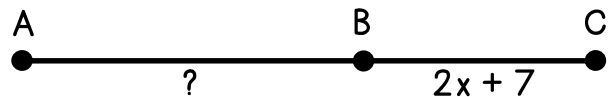
<p>9.</p> $-5(2x + 9)$	<p>10.</p> $-2.5(4k - 2)$	<p>11.</p> $-\frac{1}{2}(6t + 2)$
<p>12.</p> $-10(-4 - 2j)$	<p>13.</p> $-3(-p + 7)$	<p>14.</p> $-2(6d - 11)$

Apply your knowledge of simplifying expressions to complete the problems below.

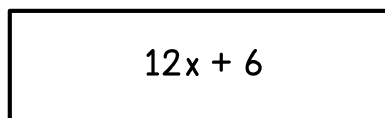
15. Write an expression for the perimeter of the rectangle.



16. The distance between points A and C is  $10x - 5$ . Find the distance between points A and B.



17. The expression below represents the area of the rectangle. What are some of the possible side lengths of the rectangle?




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18. Circle the name of any student who wrote an expression equivalent to  $-8(3x - 2)$ .

**SAM**

$$8(2 - 3x)$$

**DEJA**

$$-4(6x - 4)$$

**ADRIAN**

$$-8x$$

**MIKEY**

$$-24x + 16$$

Summarize today's lesson: