

# Distributive Property Hands-On Lab

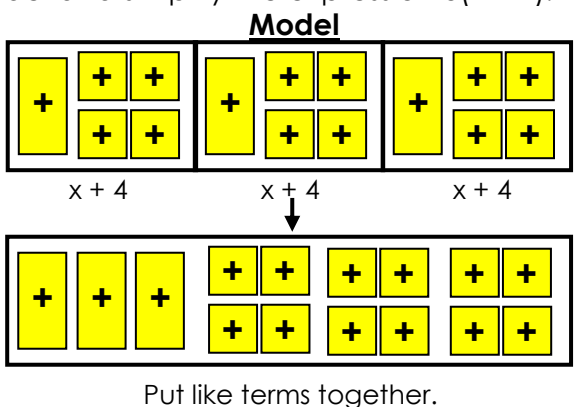
<b>Key:</b> <span style="display: inline-block; border: 1px solid black; background-color: yellow; width: 20px; height: 20px; text-align: center; line-height: 20px;">+</span> = 1 <span style="display: inline-block; border: 1px solid black; background-color: red; width: 20px; height: 20px; text-align: center; line-height: 20px;">-</span> = -1 <span style="display: inline-block; border: 1px solid black; background-color: yellow; width: 20px; height: 40px; text-align: center; line-height: 40px;">+</span> = x <span style="display: inline-block; border: 1px solid black; background-color: red; width: 20px; height: 40px; text-align: center; line-height: 40px;">-</span> = -x	<b>Remember:</b> You must multiply the term outside of the parentheses by all the terms within the parentheses.
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To simplify an expression using the distributive property, you must multiply the term on the outside of the parentheses by all of the terms inside the parentheses.



### Activity 1

Model and simplify the expression  $3(x + 4)$ .



So

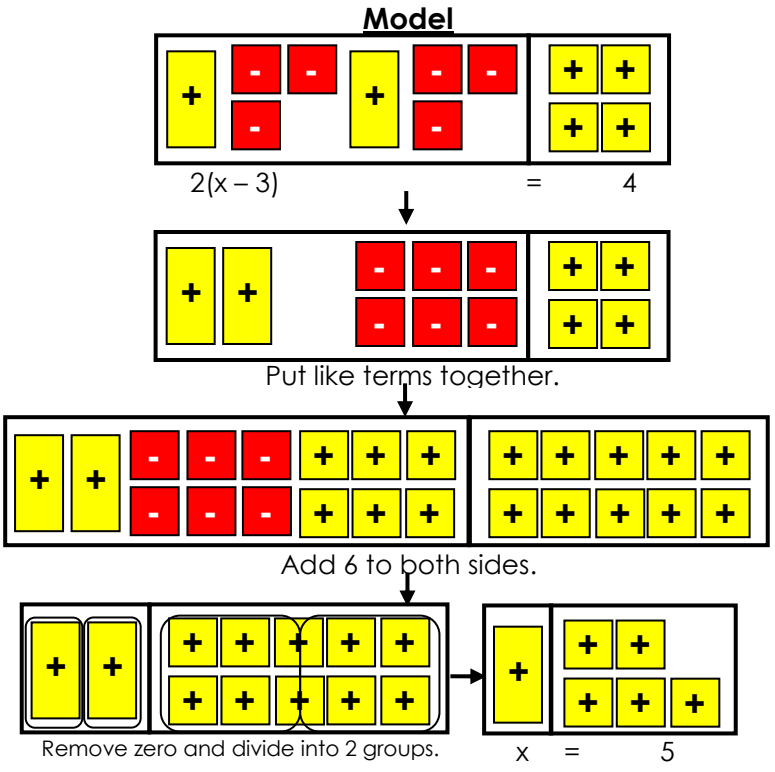
$3(x + 4)$

is equivalent to

$3x + 12$

### Activity 2

Model and solve the equation  $2(x - 3) = 4$ .



Inverse Operations

$2(x - 3) = 4$

$2x - 6 = 4$

$+6 \quad +6$

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$2x = 10$

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$2 \quad 2$

$x = 5$

**Model and simplify the expressions. (2 pts each)**

1.  $2(x - 2)$

Model

\_\_\_\_\_ So  
is equivalent to \_\_\_\_\_

2.  $5(x + 2)$

Model

\_\_\_\_\_ So  
is equivalent to \_\_\_\_\_

3.  $3(2x - 1)$

Model

\_\_\_\_\_ So  
is equivalent to \_\_\_\_\_

4.  $2(4x + 2)$

Model

\_\_\_\_\_ So  
is equivalent to \_\_\_\_\_

**Model and solve the equations. (4 pts each)**

5.  $4(2 + x) = 16$

Model

Inverse Operations

6.  $3 = 3(-x + 5)$

Model

Inverse Operations