

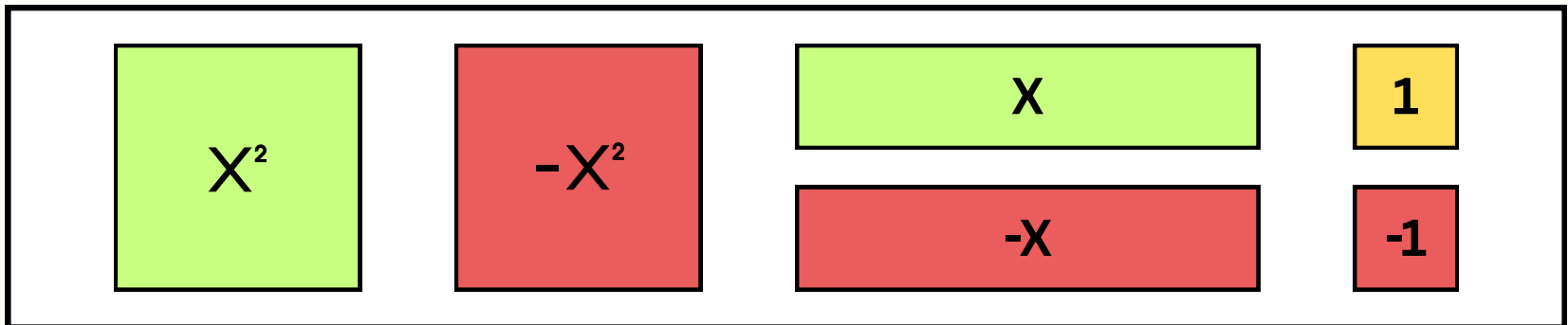
ALGEBRA TILES

Worksheet

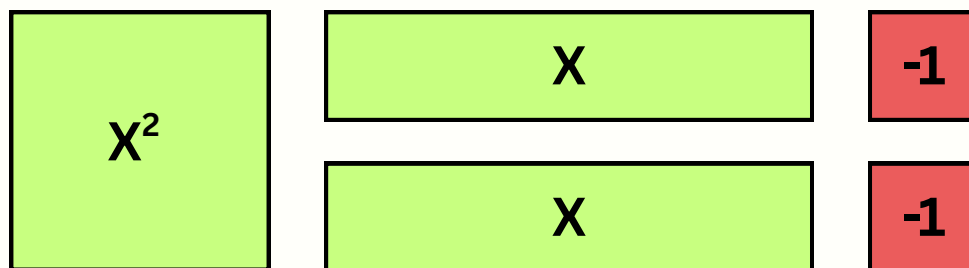
Name: _____

Date: _____

Build the expressions using algebra tiles



Example: $x^2 + 2x - 2$



Practice Questions:

$2x + 1$	$x^2 + 2x$
$2x^2 + 2$	$3x - 4$

ALGEBRA TILES

Worksheet

Name: _____

Date: _____

Look at the tiles and write the equation

<table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;">x^2</td> <td style="border: 1px solid black; padding: 5px;">$-x^2$</td> </tr> </table>	x^2	$-x^2$	<table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;">x</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">$-x$</td> </tr> </table>	x	$-x$	<table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;">1</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">-1</td> </tr> </table>	1	-1
x^2	$-x^2$							
x								
$-x$								
1								
-1								

Example:

x^2	x^2	$-x$	1	1
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Answer: $2x^2 - x + 2$

Practice Questions:

<table style="border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;">x^2</td> <td style="border: 1px solid black; padding: 5px;">x^2</td> <td style="border: 1px solid black; padding: 5px;">1</td> <td style="border: 1px solid black; padding: 5px;">1</td> </tr> </table>	x^2	x^2	1	1	<table style="border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;">$-x^2$</td> <td style="border: 1px solid black; padding: 5px;">-1</td> <td style="border: 1px solid black; padding: 5px;">-1</td> </tr> </table>	$-x^2$	-1	-1					
x^2	x^2	1	1										
$-x^2$	-1	-1											
Answer:	Answer:												
<table style="border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;">x^2</td> <td style="border: 1px solid black; padding: 5px;">1</td> <td style="border: 1px solid black; padding: 5px;">1</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;"></td> <td style="border: 1px solid black; padding: 5px;">1</td> <td style="border: 1px solid black; padding: 5px;">1</td> </tr> </table>	x^2	1	1		1	1	<table style="border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;">x^2</td> <td style="border: 1px solid black; padding: 5px;">x</td> <td style="border: 1px solid black; padding: 5px;">1</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;"></td> <td style="border: 1px solid black; padding: 5px;">x</td> <td style="border: 1px solid black; padding: 5px;">1</td> </tr> </table>	x^2	x	1		x	1
x^2	1	1											
	1	1											
x^2	x	1											
	x	1											
Answer:	Answer:												
<table style="border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;">$-x$</td> <td style="border: 1px solid black; padding: 5px;">1</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">$-x$</td> <td style="border: 1px solid black; padding: 5px;">1</td> </tr> </table>	$-x$	1	$-x$	1	<table style="border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;">x^2</td> <td style="border: 1px solid black; padding: 5px;">$-x$</td> <td style="border: 1px solid black; padding: 5px;">1</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;"></td> <td style="border: 1px solid black; padding: 5px;">$-x$</td> <td style="border: 1px solid black; padding: 5px;">1</td> </tr> </table>	x^2	$-x$	1		$-x$	1		
$-x$	1												
$-x$	1												
x^2	$-x$	1											
	$-x$	1											
Answer:	Answer:												

ALGEBRA TILES

Worksheet

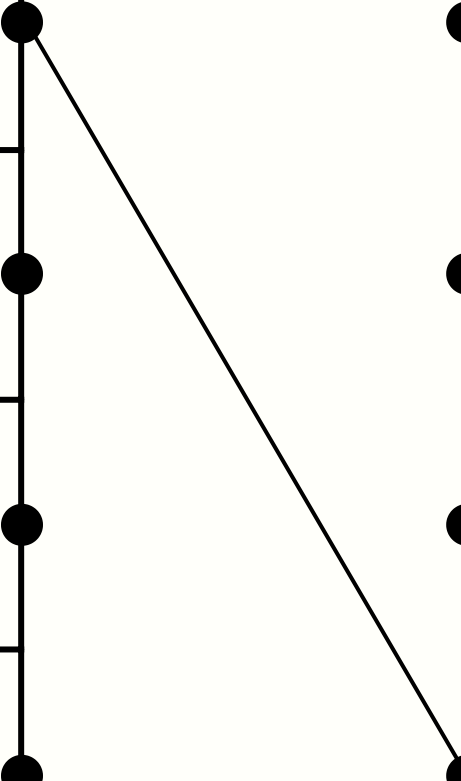
Name: _____

Date: _____

Match the algebra tiles to the expressions

x^2	x^2	$-x$	1
$-x^2$	x	-1	1
x	1	1	
x	1	1	
x^2	x		
x	x		
x^2	x^2	1	
x	x	1	
x	x	1	
x^2	-1	-1	
x	-1	-1	
x	x	1	
x	x	1	

$x^2 + 2x$
$x^2 - 4$
$2x^2 + 2$
$2x^2 - x + 2$
$4x + 2$
$2x + 4$
$-x^2 + 2x - 2$
$3x + 1$



ALGEBRA TILES

Worksheet

Name: _____

Date: _____

Simplify using algebra tiles



Step 1. Initial tiles



Step 2. Cancellation



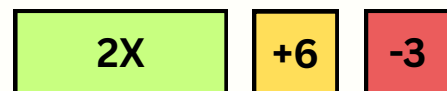
Step 3. Final Answer



Practice Section:



Expression: _____



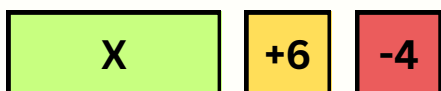
Expression: _____



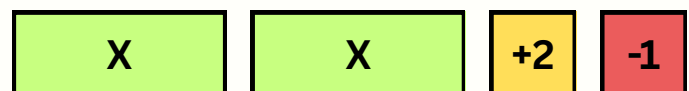
Expression: _____



Expression: _____



Expression: _____



Expression: _____

ALGEBRA TILES

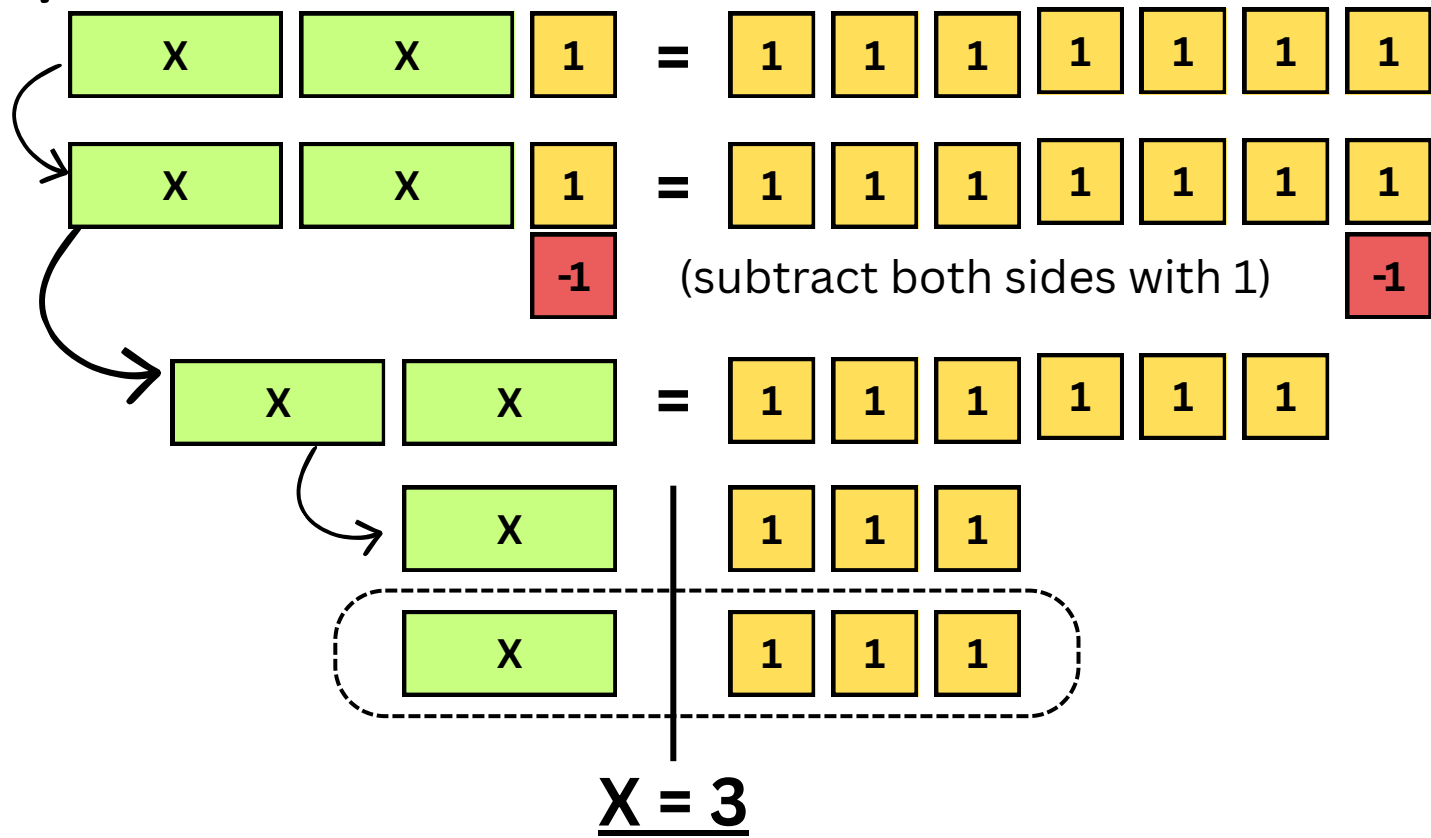
Worksheet

Name: _____

Date: _____

Solve equations using algebra tiles

Equation: $2x + 1 = 7$



Practice Equations:

$2x + 2 = 10$	
$x + 5 = 9$	
$3x + 3 = 6$	
$4x + 6 = 14$	

ALGEBRA TILES

Worksheet

Name: _____

Date: _____

Fill in the missing algebra tiles

<div style="border: 1px solid black; background-color: #90EE90; width: 100px; height: 30px; display: flex; align-items: center; justify-content: center;">X</div>	<div style="border: 1px solid black; background-color: #F08080; width: 100px; height: 30px; display: flex; align-items: center; justify-content: center;">-X</div>	<div style="border: 1px solid black; background-color: #FFD700; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">1</div>	<div style="border: 1px solid black; background-color: #F08080; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">-1</div>
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Equation	Tiles	Missing Tiles
$2x + 1$	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> </div>	<div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div>
$3x - 4$	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div> <div style="border: 1px solid black; background-color: #F08080; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">-1</div> <div style="border: 1px solid black; background-color: #F08080; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">-1</div> </div> <hr style="width: 60px; margin: 5px auto;"/> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div> <div style="border: 1px solid black; background-color: #F08080; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">-1</div> </div>	
$x + 3$	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> </div>	
$4x + 2$	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> </div> <hr style="width: 60px; margin: 5px auto;"/> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> </div>	
$2x - 4$	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div> <div style="border: 1px solid black; background-color: #F08080; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">-1</div> </div> <hr style="width: 60px; margin: 5px auto;"/> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div> <div style="border: 1px solid black; background-color: #F08080; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">-1</div> </div>	
$x + 6$	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> </div> <hr style="width: 60px; margin: 5px auto;"/> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> </div>	
$3x + 2$	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> </div> <hr style="width: 60px; margin: 5px auto;"/> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> </div>	
$4x + 4$	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> </div> <hr style="width: 60px; margin: 5px auto;"/> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #90EE90; width: 60px; height: 25px; display: flex; align-items: center; justify-content: center;">X</div> <div style="border: 1px solid black; background-color: #FFD700; width: 25px; height: 25px; display: flex; align-items: center; justify-content: center;">1</div> </div>	

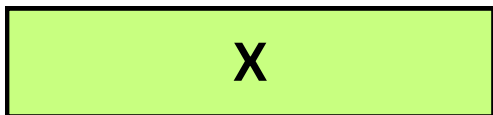
ALGEBRA TILES

Worksheet

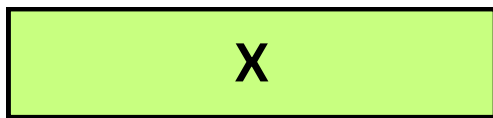
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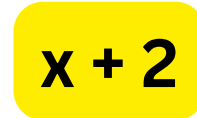
Algebra tiles word problems



Example: Riya has x pencils. She buys 2 more pencils.



=



Practice Questions:

Tracie has x candies. Her friend gives her 3 more candies.

Expression:

Sara has 2 bags of books. Each bag has 4 number of books.

Expression:

Rick has x marbles. he loses 1 marble.

Expression:

A box has x chocolates. 4 more chocolates are added.

Expression:

There are x apples in a basket. 2 more apples are added.

Expression:

Amy has x books. She gets 2 more books and then 1 more.

Expression:

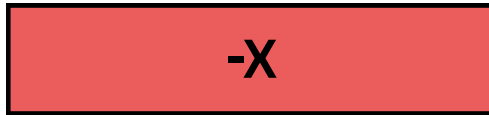
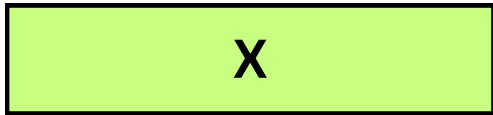
ALGEBRA TILES

Worksheet

Name: _____

Date: _____

Draw and colour the algebra tiles

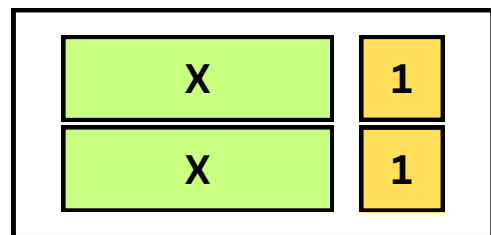


Example: Step 1: Draw 2 rectangles. (x tiles)

$2x + 2$

Step 2: Draw 2 small squares. (unit tiles)

Step 3: Arrange them neatly.



Practice Questions:

Expression	Steps Guide	Drawing Grid
$x + 2$	1. Draw a rectangle 2. Draw 2 squares.	

Expression	Steps Guide	Drawing Grid
$x + 3$	1. Draw a rectangle 2. Draw 3 squares.	

Expression	Steps Guide	Drawing Grid
$2x + 1$	1. Draw 2 rectangles 2. Draw 1 square.	

Expression	Steps Guide	Drawing Grid
$3x + 2$	1. Draw 3 rectangles 2. Draw 2 squares.	





ALGEBRA TILES


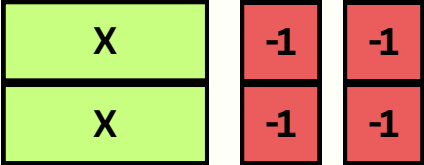
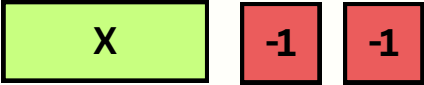
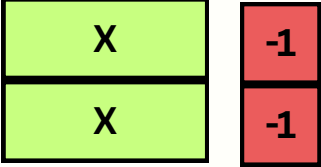
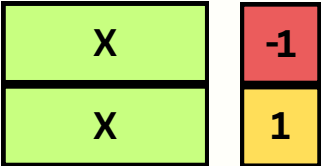
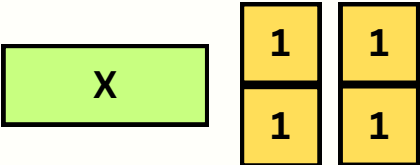
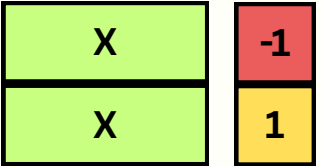
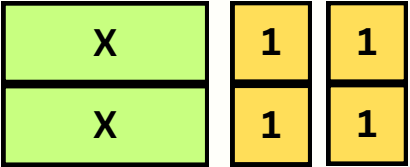
Worksheet

Name: _____

Date: _____

Error Detection: Find the mistake

			
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Equation	Tiles	Mistake
$3x + 1$		2 x tiles are missing
$3x + 4$		
$x - 3$		
$4x - 2$		
$2x + 2$		
$x + 6$		
$3x - 2$		
$-2x + 4$		

ALGEBRA TILES

Worksheet

Name: _____

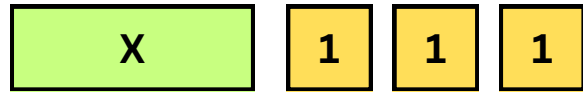
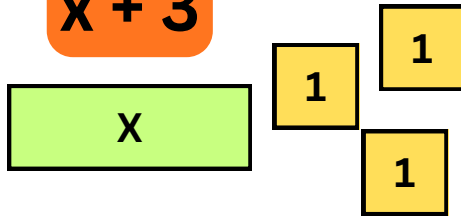
Date: _____

Puzzle: Use the tiles to build the expression

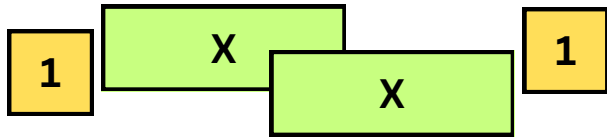


Example:

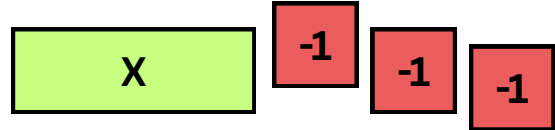
$$x + 3$$



Practice Questions:



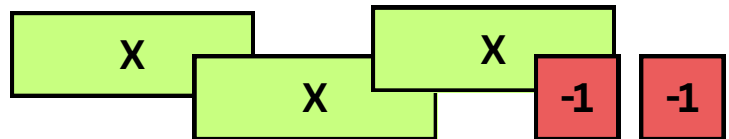
Expression: $2x + 2$



Expression: $x - 3$



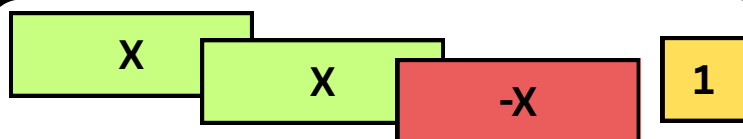
Expression: $x + 5$



Expression: $3x - 2$



Expression: $-2x + 1$



Expression: $2x - x + 1$