

Name _____

SOLVING EQUATIONS—THE DISTRIBUTIVE PROPERTY #2

Directions: Solve for x in each equation below. You can attack this problem several ways. *Example 1* shows you how to use the distributive property to simplify the equations, then use inverse operations to isolate the variable. *Example 2* shows you how to divide both sides by the number being distributed, then use inverse operations to isolate the variable.

Examples: $3(2x - 10) = 48$ (<i>distribute 3 to each term</i>) $6x - 30 = 48$ (<i>add 30 to both sides</i>) $6x = 78$ (<i>divide both sides by 6</i>) $x = 13$	$5(2x - 3) = 25$ (<i>divide by 5 on both sides</i>) $2x - 3 = 5$ (<i>add 3 to both sides</i>) $2x = 8$ (<i>divide both sides by 2</i>) $x = 4$
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1) $4(2x - 10) = 16$

2) $3(4x - 3) = 27$

3) $2(x - 10) = 60$

4) $4(3x - 4) = 68$

$x =$ _____

$x =$ _____

$x =$ _____

$x =$ _____

5) $5(2x - 3) = 45$

6) $7(4x - 1) = 49$

7) $2(10x - 10) = 60$

8) $4(3x - 2) = 76$

$x =$ _____

$x =$ _____

$x =$ _____

$x =$ _____

9) $5(2x - 10) = 30$

10) $2(12x - 1) = 22$

11) $15(x - 3) = 60$

12) $2(20x - 2) = 36$

$x =$ _____

$x =$ _____

$x =$ _____

$x =$ _____

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/ SOLVING EQUATIONS—VARIABLES ON BOTH SIDES #2

Directions: Solve for x in each equation below. Use inverse operations to get the variable all by itself on one side of the equation, and then get the integers (numbers) alone on the other side of the equation.

Examples: $5x - 21 = 2x - 6$ (add 21 to both sides) $5x - 12 = 2x - 9$ (add 12 to both sides)
 $5x = 2x + 15$ (subtract $2x$ from both sides) $5x = 2x + 3$ (subtract $2x$ from both sides)
 $3x = 15$ (divide both sides by 3) $3x = 3$ (divide both sides by 3)
 $x = 5$ $x = 1$

1) $3x - 61 = 2x - 50$

2) $6x - 64 = 2x - 44$

3) $8x - 90 = 2x - 36$

4) $4x - 18 = x - 3$

$x =$ _____

$x =$ _____

$x =$ _____

$x =$ _____

5) $3x - 71 = 2x - 50$

6) $6x - 68 = 2x - 44$

7) $8x - 72 = 2x - 36$

8) $4x - 21 = x - 18$

$x =$ _____

$x =$ _____

$x =$ _____

$x =$ _____

9) $4x - 82 = 2x - 50$

10) $5x - 68 = 2x - 44$

11) $8x - 88 = 2x - 34$

12) $4x - 50 = 2x - 8$

$x =$ _____

$x =$ _____

$x =$ _____

$x =$ _____