

Name_____

SOLVING EQUATIONS—VARIABLES ON BOTH SIDES #1

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: $5x = 2x + 48$ *(subtract $2x$ from both sides)*
 $3x = 48$ *(divide both sides by 3)*
 $x = 16$

$5x + 12 = 2x + 36$ *(subtract $2x$ from both sides)*
 $3x + 12 = 36$ *(subtract 12 from both sides)*
 $3x = 24$ *(divide both sides by 3)*
 $x = 8$

1) $3x = 2x + 50$

2) $6x = 2x + 44$

3) $8x = 2x + 36$

4) $4x = x + 18$

$x =$ _____

$x =$ _____

$x =$ _____

$x =$ _____

5) $7x + 10 = 3x + 120$

6) $20 + 2x = x + 56$

7) $6x + 16 = 2x + 28$

8) $12x + 12 = 3x + 84$

$x =$ _____

$x =$ _____

$x =$ _____

$x =$ _____

9) $3 + 6x = 2x + 27$

10) $8x + 2 = 72 + x$

11) $2x + 20 = x + 60$

12) $4x + 1 = 25 + 2x$

$x =$ _____

$x =$ _____

$x =$ _____

$x =$ _____