

Name \_\_\_\_\_

**SOLVING EQUATIONS—COMBINING LIKE TERMS #1**

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**Directions:** Solve for  $x$  in each equation below. Your first step should be to combine any like terms. Then use inverse operations to get the variable all by itself on one side of the equation. Make sure to show your work.

Examples:  $3x + 12 + x = 48$  (add  $3x + x$ )       $3x + 12 + 2 = 25$  (add  $12 + 2$ )  
 $4x + 12 = 48$  (subtract  $12$  from both sides)       $3x + 13 = 25$  (subtract  $13$  from both sides)  
 $4x = 36$  (divide both sides by  $4$ )       $3x = 12$  (divide both sides by  $3$ )  
 **$x = 9$**        **$x = 4$**

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1)  $3x + 10 + 2x = 50$

2)  $6x + 10 + 2x = 42$

3)  $2x + 20 + 2x = 60$

4)  $x + 12 + x = 18$

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

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

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

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

8)  $3x + 12 + 9x = 72$

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

9)  $3 + 6x + 2 = 29$

10)  $7 + 7x + 2 = 72$

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

12)  $x + 4x + 1 = 26$

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_