

## Lesson 27T ~ Simplifying and Solving Equations

Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

Solve each equation for the variable. Show your work and check your solution.

1.  $3x + 5x - 2x = 24$

$x = 24$

a. Simplify first by combining like terms

$x \neq 24$

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b. Solve the new equation for the variable

c. Check your answer

Check your answer:

$3 \cdot \text{} + 5 \cdot \text{} - 2 \cdot \text{} \stackrel{?}{=} 24$

YES  NO

2.  $5y + 3 - 3y + 7 = 16$

a. Simplify first by combining like terms

b. Solve the new equation for the variable

c. Check your answer

Check your answer:

$5 \cdot \text{} + 3 - 3 \cdot \text{} + 7 \stackrel{?}{=} 16$

YES  NO

3.  $p + 5p - 2p + 4p = -40$

4.  $\frac{1}{4}h + \frac{1}{2}h + \frac{1}{4}h + 4 = 8$

Check your answer:

Check your answer:

Solve each equation for the variable. Show your work and check your solution.

5.  $4m + 2(m - 5) = 26$

Distribute  
first.

6.  $5(y + 2) - y = 42$

Check your answer:

Check your answer:

7.  $96 = 10(x + 2) + 6$

8.  $47 = 2(k + 3) + 3(k - 3)$

Check your answer:

Check your answer:

9. Dan told his friend this riddle: "I am thinking of a number. Four times my number plus twice my number is eighteen. What number am I thinking of?"

a. Write an equation that models Dan's statement.

$$\boxed{\phantom{00}} + \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

b. Solve the equation. What number was Dan thinking of?