## Lesson 5.3 Simplifying Algebraic Expressions

Simplify each expression.

1. 
$$g + g + g = 3g$$

$$1 + 1 + 1 = 3g$$

**2.** 
$$4w + 6w = 10w$$

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3. 
$$8a - 3a = 5a$$

$$8a - 3a = 5a$$

**4.** 
$$15b - 7b = 8b$$

$$15b - 7b = 8b$$

**5.** 
$$16h - 7h - 2h = 7h$$

$$16h - 7h = 9h$$

$$9h - 2h = 7h$$

**6.** 
$$20k - 6k - 8k = 6k$$

$$20k - 6k = 14k - 8k = 6k$$

7. 
$$9d - 5d + 7d = 11d$$
  
 $9d - 5d = 4d + 7d = 11d$ 

8. 
$$17n + 6n - 8n$$

$$17n + 6n = 23n$$
  $23n - 8n = 15n$ 

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10g + 6

## Simplify each expression.

$$5x + 7x - 4$$

$$5x + 7x = 12x$$



$$6 + 7g + 3g$$

$$7g + 3g = 10g$$

4x



You cannot subtract 12x - 4. You could only do this if had an x. Example: 12x - 4x

Therefore, the problem cannot be solved any further

17.

$$8n + 5 - 4n$$

$$8n - 4n = 4n$$

12.

$$8d - 5 + 7d - 9d$$

$$9d - 8d = d$$

$$d + 7d = 8d$$

$$3 + 8k + 9 - 5k$$

$$8k - 5k = 3k$$

$$9 + 3 = 12$$

15.

$$10 + 5h - 6 + 8h$$

$$8h + 5h = 13h$$

$$10 - 6 = 4$$

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$$8 + 12s - 7 - 9s + 4$$

$$12s - 9s = 3s$$

$$8 + 4 = 12 - 7 = 5$$

$$3s + 5$$

$$d + 7d = 8d$$

14.

$$4.$$
  $10w + 11 - 3w - 8$ 

$$10w - 3w = 7w$$

$$11 - 8 = 5$$

$$7w + 5$$

$$11 + 7m = 6 - 4n$$

$$7m - 4m = 3m$$

11 - 6

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$$5n + 10 + 8n - 9n + 3$$

$$5n + 8n = 13n - 9n = 4n$$

$$10 + 3 = 13$$

$$13 + 4n$$