

Name: Key

Date:

Topic:

Class:

Main Ideas/Questions      Notes/Examples

**Warm-Up**

Directions: Simplify each expression by combining like terms.

1. $10x - 16x$ $-6x$	2. $12a - 8 + 4a + a$ <del>12a</del> $17a - 8$
3. $5w - 6 - 8 + 7w$ $12w - 14$	4. $-7k + 17 - 2k - 3$ $-9k + 14$

Directions: Simplify each expression by distributing.

5. $8(x + 5)$ $8x + 40$	6. $-4(2x - 9)$ $-8x + 36$
7. $7(6 - x)$ $42 - 7x$	8. $-3(x + 1)$ $-3x - 3$

**Simplifying Expressions**

An algebraic expression is in **simplest form** when it has no like terms and no parentheses.

To simplify an algebraic expression:

1  $3(2x + 3) + 4x$  → 2  $10x + 9$

**Examples**

Directions: Simplify each expression.

1. $3(x - 5) + 8x + 1$ $3x - 15 + 8x + 1$ $11x - 14$	2. $5(n + 6) - 21$ $5n + 30 - 21$ $5n + 9$
3. $-7(w + 4) + 2w - 15$ $-7w + (-28) + 2w - 15$ $-5w - 43$	4. $12(4 - k) - 9k$ $48 - 12k - 9k$ $-21k + 48$

5.  $6(r-2) - r + 26 - 7r$   
 $6r - 12 - r + 26 - 7r$   
 $-2r + 14$

6.  $-4(7m-1) - 16 + 22m$   
 $-28m + 4 - 16 + 22m$   
 $-6m - 12$

7.  $-13 + 5(y+2) - 8$   
 $-13 + 5y + 10 - 8$   
 $5y - 11$

8.  $12x - 2(9-x)$   
 $12x - 18 + 2x$   
 $14x - 18$

9.  $18 - (7v+1)$   
 $18 - 7v - 1$   
 $-7v + 17$

10.  $-2p - 6(p-4) + 22$   
 $-2p - 6p + 24 + 22$   
 $-8p + 46$

11.  $1 - 9(2n+3) - 7n$   
 $1 - 18n - 27 - 7n$   
 $-25n - 26$

12.  $2(a-4) + 3(9-a)$   
 $2a - 8 + 27 - 3a$   
 $-a + 19$

13.  $8(2k-7) - 4(k+5)$   
 $16k - 56 - 4k - 20$   
 $12k - 76$

14.  $14y - (y-2) + 5(y+9)$   
 $14y - y + 2 + 5y + 45$   
 $18y + 47$

Summary: \_\_\_\_\_

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