

# Simplifying Expressions

## Distributive Property

$$\begin{aligned} 3(x + 2y) &= 3x + 3 \cdot 2y \\ &= 3x + 6y \end{aligned}$$

1.  $-7(a + b) =$

6.  $3(2a - 8b) =$

2.  $x(y - 4) =$

7.  $2x(3y + -6) =$

3.  $-\frac{2}{3}(c - 12) =$

8.  $7(-5x + 8z) =$

4.  $-8\left(\frac{t}{2} + 6\right) =$

9.  $-5y(6z - 10) =$

5.  $y(-16 + 2x) =$

10.  $-3x(-7 + 8y) =$

## Combining Like Terms

$$\begin{aligned} 6m - 4m + 3p &= (6 - 4)m + 3p \\ &= 2m + 3p \end{aligned}$$

same variable

1.  $9y + 6y - 2 =$

6.  $4a + 7 + 3a - 8 - 3a =$

2.  $25x - x + 2y =$

7.  $16x + -18y + 10x - 7y =$

3.  $4a + 8b + 11a - 10b =$

8.  $6c - 8ab + 9c - 10 =$

4.  $13xy + 18xy - 20xy =$

9.  $18ab + -6a + -7b + 26ab + -7b =$

5.  $-2m + 16 - 13m =$

10.  $5x - 3x + 2xy + 31x + -18xy =$

# An Expression by Any Other Name

Simplify each expression. Cross out each box that contains an answer. The remaining words can be restated to make a familiar proverb.

- |                                       |                                  |
|---------------------------------------|----------------------------------|
| 1. $3(a + b) + 2b =$                  | 9. $4a + -7(a + 2) =$            |
| 2. $5a + 2a(5 - b) =$                 | 10. $6(a + 2b) + 8a - 16b =$     |
| 3. $8 - 3(6 - 6a) =$                  | 11. $3a + -2(a + b) =$           |
| 4. $4a + 6(a + 8) =$                  | 12. $2(3a - 4b) - 6a =$          |
| 5. $-2a - 3(b - 4a) =$                | 13. $-5(2a - 3b) + 5(3b - 2a) =$ |
| 6. $8(6a + 7b) - 11(2b + 8a) =$       | 14. $4(11a - 9b) - 7(6a) =$      |
| 7. $-6(a + 5b) - 3(-7b - a) =$        | 15. $-3(4a - 5b) - (a - b) =$    |
| 8. $2(a - b) + 3(a - b) - 4(a - b) =$ |                                  |

$10 + 18a$ YOU	$-10 + 18a$ ARE	$a - 2b$ SEE	$2a + 36b$ CANNOT	$3a + 5b$ LEAD	$12a - 8b$ INSTRUCT
$14a + 4b$ AN	$14a - 4b$ A	$40a + 34b$ ELDERLY	$-40a + 34b$ HORSE	$3a - 14$ CANINE	$2a - 36b$ TO
$10a + 48$ WATER	$-3a - 14$ BUT	$12a - 8b$ ON	$-13a + 16b$ YOU	$-3a - 9b$ CANNOT	$15a - 2b$ FRESH
$10a - 3b$ MAKE	$a - b$ HIM	$15a - 2ab$ DOWN	$-20a + 30b$ DRINK	$20a - 30b$ PROCEDURES	$-8b$ HOME

Write the familiar proverb.

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