REVIEW: Simplifying Expressions

Name _____

Key Concept and Vocabulary

Combine variable terms.

$2x + 4 + 3x - 1 = 5x + 3$

Combine numerical terms.

Simplifying Expressions

Visual Model

Algebra Tiles
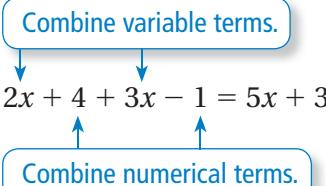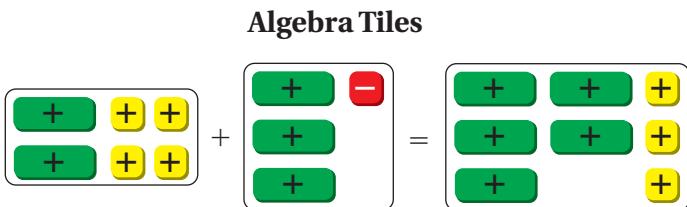
Skill Examples

1. $2x + 5x = 7x$

2. $1 + n + 4 = n + 5$

3. $(2x + 3) - (x + 2) = x + 1$

4. $2(y - 1) + 3(y + 2) = 5y + 4$

Application Example

5. The original cost of a shirt is x dollars. The shirt is on sale for 30% off. Write a simplifed expression for the sale cost.

**30% Off**

$$x - 0.3x = 0.7x$$

∴ The sale cost is $0.7x$.

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Check your answers at BigIdeasMath.com.

Simplify the expression. *(Remove parentheses and combine like terms.)*

6. $4x + 6x =$ _____ $10x$

7. $3n + 5 - 2n =$ _____ $n + 5$

8. $9x + 3 - 6x - 2 =$ _____ $3x + 1$

9. $3(x + 2) =$ _____ $3x + 6$

10. $7m - 2m + 5m =$ _____ $10m$

11. $2 - (x + 1) =$ _____ $1 - x$

12. $(3x + 6) - x =$ _____ $2x + 6$

13. $5 - (1 - n) =$ _____ $n + 4$

14. $(x + 6) - (x + 6) =$ _____ 0

15. $(4x - 2) + 3(x + 1) =$ _____ $7x + 1$

16. $(5x + 4) - 2(x + 1) =$ _____ $3x + 2$

17. $5(x + 2) - 2(x + 2) =$ _____ $3x + 6$

Write a simplified expression for the perimeter of the rectangle or triangle.

18.

$7x$

$8x$

Perimeter = ___ $30x$

19.

$5n$

$9n$

Perimeter = ___ $28n$

20.

$18x$ $18x$

$21x$
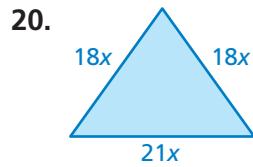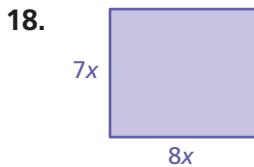
Perimeter = ___ $57x$

21. The original cost of a cell phone is x dollars. The phone is on sale for 35% off. Write a simplified expression for the sale cost. _____ $0.65x$

35% Off

Topic 17.3