

Name: _____

Date: _____

Lesson 7.3 Simplifying Algebraic Expressions

Simplify each expression. Then state the coefficient of the variable in each expression.

1. $x + x + 3 + 4$

= _____

2. $k - k + k - 3$

= _____

Simplify each expression.

3. $6g - 3g + 8g - g$

= _____

4. $10u + 4u - 8u - 3u$

= _____

5. $9m + 4m - 5m + 3m$

= _____

6. $12x - 4x + 3x + 5x$

= _____

State whether each pair of expressions are equivalent.

7. $8z + 2z$ and $3z + 4z + 3z$

8. $9y$ and $9 + y$

9. $7n - 2$ and $2 - 7n$

10. $5g - 2g$ and $\frac{18g}{6}$

Simplify each expression.

11. $12 - 8 + 5d + 4d - 6d$

= _____

12. $20 + 7k - 12 - 5k + 8k$

= _____

13. $9m + 11 - 8m - 6 + 5m$

= _____

14. $18 + 4n - 9 + 8n - 11n$

= _____

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Simplify each expression.

15. $20 + 5u + 10u - 20 - 14u$

= _____

16. $20 + 12k - 7k - 8$

= _____

17. $6x + 15 + 9x - 10x - 8$

= _____

18. $r + 9 + 10r - 5 - 4r$

= _____

Solve.

19. Peggy bought 2 racing cars for $5x$ dollars each and 3 model motorcycles for $3x$ dollars each. Find the amount of money Peggy paid in terms of x .

20. Kevin works $3z$ hours each day from Monday to Friday. He works $(4z - 7)$ on Saturday. Kevin does not work on Sunday. Find the number of hours Kevin works in one week in terms of z .

21. The length of a square tile is $3w$ centimeters. Alice places 4 square tiles in a row to form a figure as shown below. Find the perimeter of the figure in terms of w .



22. Shanti baked $5p$ croissants. Jon baked twice as many croissants as Shanti. Ching baked 16 fewer croissants than Jon. Find the total number of croissants they baked in terms of p .