

Practice 6-2

Simplifying Algebraic Expressions

Combine like terms.

1. $9j + 34j$

2. $23s - 12s$

3. $5t - 12t + 17t$

4. $6q + 14q - 8q$

5. $7t - 12t + 4t$

6. $16w + 7w - 5w$

7. $y + 13y - 9y$

8. $5z - 2z - 13z$

9. $4x + 21x - 6x$

Simplify each expression.

10. $4a + 7 + 2a$

11. $8(k - 9)$

12. $(w + 3)7$

13. $5(b - 6) + 9$

14. $-4 + 3(6 + k)$

15. $12j - (9j + 7)$

16. $-9 + 8(x + 6)$

17. $4(m + 6) - 3$

18. $28k + 36(7 + k)$

19. $3.09(j + 4.6)$

20. $7.9y + 8.4 - 2.04y$

21. $4.3(5.6 + c)$

22. $9.8c + 8d - 4.6c + 2.9d$

23. $18 + 27m - 29 + 36m$

24. $8(j + 12) + 4(k - 19)$

25. $4.2r + 8.1s + 1.09r + 6.32s$

Solve.

26. Tyrone bought 15.3 gal of gasoline priced at g dollars per gallon, 2 qt of oil priced at q dollars per quart, and a wiper blade priced at \$3.79. Write an expression that represents the total cost of these items.
- _____

27. Choose a number. Multiply by 2. Add 6 to the product. Divide by 2. Then subtract 3. What is the answer? Repeat this process using two different numbers. Explain.
- _____
- _____
- _____

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Find the number described by each clue. Then fill in the puzzle so that all of the digits match correctly.

1. One-seventh of the mileage on my car is 11,232. Find the mileage.

78,624

2. If you multiply a number by 9 and add 16 the result is 250. Find the number.

3. If you double a number and then add 54, the result is 1,000. Find the number.

4. If you subtract -46 from twice a number, the result is 548. Find the number.

5. The sum of two consecutive even integers is 546. Find the smaller integer.

6. If you triple a number and then subtract 17, the result is 64. Find the number.

7. If you add one half a number to itself, you get 3,003. Find the number.

8. The perimeter of a triangle is 465 cm. The lengths of the sides are consecutive integers. Find the length of the smallest side.

9. The perimeter of a rectangular pig pen is 310 ft. The length is 5 ft greater than the width. Find the length.

10. If you add 2 to four times the length (in kilometers) of the Amazon river, the result is 25,750. Find the length of the river.

