

anyone

Answers

3.1

Algebraic Expressions (pp. 163-172)

Learning Target: Simplify algebraic expressions.

Identify the terms and like terms in the expression.

1. $z + 8 - 4z$
 terms: $z, 8, -4z$
 like terms: z and $-4z$

2. $3n + 7 - n - 3$
 $3n, 7, -n, -3$
 $3n, -n$ and $7, -3$

3. ~~$10x^2 - y + 12 - 3x^2$~~

Simplify the expression.

4. $4h - 8h$
 $-4h$

5. $6.4r - 7 - 2.9r$
 $3.5r - 7$

6. $2m - m - 7m$
 $-6m$

7. $6y + 9 + 3y - 7$
 $9y + 2$

8. $\frac{3}{5}x + 19 - \frac{3}{20}x - 7$
 $\frac{9}{20}x + 12$

9. $\frac{2}{3}y + 14 - \frac{1}{6}y - 8$
 $\frac{1}{2}y + 6$

12. You buy the same number of brushes, rollers, and paint cans.

a. Write and interpret an expression in simplest form that represents the total amount of money you spend on painting supplies.

$21.79x + 3.99x + 6.89x$

$32.67x$

b. How much do you spend when you buy one set of supplies for each of 3 painters?

$32.67(3)$

$\$98.01$



Paint \$21.79

Brush \$3.99

Paint roller \$6.89



3.2

Adding and Subtracting Linear Expressions (pp. 173-182)

Learning Target: Find sums and differences of linear expressions.

Find the sum.

13. $(c - 4) + (3c + 9)$

$4c + 5$

15. $(-2.1m - 5) + (3m - 7)$

$0.9m - 12$

Find the difference.

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

$-2x - 3$

19. $\left(\frac{1}{2}h + 7\right) - \left(\frac{3}{2}h + 9\right)$

$-1h - 2$

14. $(5z + 4) + (3z - 6)$

$8z - 2$

16. $\left(\frac{5}{4}q + 1\right) + (q - 4) + \left(-\frac{1}{4}q + 2\right)$

$2q - 1$

18. $(4y + 3) - (2y - 9)$

$2y + 12$

20. $(4 - 3.7b) - (-5.4b - 4) - (1.2b + 1)$

$7 + 0.5b$

3.3

Writing Equivalent Expressions (pp. 183-190)

Learning Target: Apply properties of operations to generate equivalent expressions.

Simplify the expression.

23. $2(a - 3)$

$2a - 6$

24. $-3(4x - 10)$

$-12x + 30$

25. $9(-3w - 6.2 + 2w)$

$-27w - 55.8 + 18w$

$-9w - 55.8$

26. $3(2 + q) + 15$

$6 + 3q + 15$

$21 + 3q$

27. $-1.5(4 - n) + 2.8$

$6 + 1.5n + 2.8$

$1.5n + 8.8$

28. $\frac{2}{5}(d - 10) - \frac{2}{3}(d + 6)$

$\frac{2}{5}d - 4 - \frac{2}{3}d - \frac{2}{3}$

$-\frac{4}{15}d - 4\frac{2}{3}$

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Determine whether the expressions are equivalent.

30. $5(2p + 3) - 4$, $10p + 11$
 $10p + 15 - 4 = 10p + 11$ *yes*

31. $6.4 + 1.6(3 - 2.3a)$, $11.2 + 3.68a$
 $6.4 + 4.8 - 3.68a$
 $11.2 - 3.68a$ *no*

3.4 Solving One-Step Equations (pp. 191-204)

Learning Target: Write and solve one-step equations.

Solve the equation. Check your solution.

35. $p - 3 = -4$
 $+3$
 $p = -1$

36. $6 + q = 1$
 -6
 $q = -5$

37. $-2 = -22 + j$
 $+22$
 $20 = j$

38. $b - 19 = -11$
 $+19$
 $b = 8$

39. $\frac{3}{4} = \frac{1}{4} - n$
 $-\frac{1}{4}$
 $\frac{2}{4} = -n$
 $\frac{1}{2} = n$

40. $-\frac{5}{6} = -v - \frac{7}{8}$
 $+\frac{7}{8}$
 $-\frac{1}{24} = -v$
 $-\frac{1}{24} = v$

41. $t - 3.7 = 1.2$
 $+3.7$
 $t = 4.9$

42. $l + 15.2 = -4.5$
 -15.2
 $l = -19.7$

43. $8.4 = x - 9$
 $+9$
 $17.4 = x$

Ch 3.1 - 3.5 TEST REVIEW

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Solve the equation. Check your solution.

45. $\frac{x}{3} = -8$

$$\begin{array}{l} \cdot 3 \\ \hline x = -24 \end{array}$$

46. $-7 = \frac{y}{7}$

$$\begin{array}{l} \cdot 7 \\ \hline -49 = y \end{array}$$

47. $-\frac{3}{4} = -\frac{z}{4}$

$$\begin{array}{l} \cdot -4 \\ \hline 3 = z \end{array}$$

48. $-\frac{w}{20} = -2.5$

$$\begin{array}{l} \cdot -20 \\ \hline w = 50 \end{array}$$

49. $-8 = 4x$

$$\begin{array}{l} \div 4 \\ \hline -2 = x \end{array}$$

50. $-10 = 2y$

$$\begin{array}{l} \div 2 \\ \hline -5 = y \end{array}$$

51. $22.8 = -2r$

$$\begin{array}{l} \div -2 \\ \hline 11.4 = r \end{array}$$

52. $-6.8w = 3.4$

$$\begin{array}{l} \div -6.8 \\ \hline w = -0.5 \end{array}$$

53. $-32.4 = -5.4z$

$$\begin{array}{l} \div -5.4 \\ \hline 6 = z \end{array}$$

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3.5

Solving Two-Step Equations (pp. 205-214)

Learning Target: Write and solve two-step equations.

Solve the equation. Check your solution.

57. $-2c + 6 = -8$

$$\begin{array}{r} -6 \\ -2c + 6 = -8 \\ -2c = -14 \\ \div -2 \\ c = 7 \end{array}$$

58. $5 - 4t = 6$

$$\begin{array}{r} -5 \\ -4t = 1 \\ \div -4 \\ t = -\frac{1}{4} \end{array}$$

59. $-3x - 4.6 = 5.9$

$$\begin{array}{r} +4.6 \\ -3x - 4.6 = 5.9 \\ -3x = 10.5 \\ \div -3 \\ x = -3.5 \end{array}$$

60. $\frac{w}{6} + \frac{5}{8} = -1\frac{3}{8}$

$$\begin{array}{r} +\frac{5}{8} \\ \frac{w}{6} + \frac{5}{8} = -1\frac{3}{8} \\ \frac{w}{6} = -2 \\ \cdot 6 \\ w = -12 \end{array}$$

$w = -4\frac{1}{2}$

61. $3(3w - 4) = -20$

$$\begin{array}{r} 9w - 12 = -20 \\ +12 \\ 9w = -8 \\ \div 9 \\ w = -\frac{8}{9} \end{array}$$

$w = -0.\bar{8}$

62. $-6y + 8y = -24$

$$\begin{array}{r} 2y = -24 \\ \div 2 \\ y = -12 \end{array}$$

63. Write and solve an equation to find the width of the rectangle.

$$215 + 215 + w + w = 750$$

$$2w + 430 = 750$$

$$-430$$

$$2w = 320$$

$$\div 2$$

$$w = 160$$

