Practice C

Solving Two-Step Equations

Solve. Check each answer.

1. $15h - 4 = 6$

$$\underline{\quad h = \frac{2}{3} \quad}$$

2. $25k + 12 = -13$

$$\underline{\quad k = -1 \quad}$$

3. $8m - 14 = -7$

$$\underline{\quad m = \frac{7}{8} \quad}$$

4. $-5m - 6 = 84$

$$\underline{\quad m = -18 \quad}$$

5. $3f + 8 = 28$

$$\underline{\quad f = 6\frac{2}{3} \quad}$$

6. $5z + 6 = -20$

$$\underline{\quad Z = -5\frac{1}{5} \quad}$$

Solve.

7. $\frac{d}{14} - 9 = 5$

$$\underline{\quad d = 196 \quad}$$

8. $\frac{a}{35} + 20 = 18$

$$\underline{\quad a = -70 \quad}$$

9. $\frac{3}{4} - 9p = -\frac{3}{5}$

$$\underline{\quad p = \frac{3}{20} \quad}$$

10. $-2\frac{2}{3} + \frac{d}{6} = \frac{2}{3}$

$$\underline{\quad d = 20 \quad}$$

11. $-\frac{1}{4} + \frac{f}{8} = \frac{1}{2}$

$$\underline{\quad f = 6 \quad}$$

12. $-\frac{2}{3} = 6 + \frac{v}{-3}$

$$\underline{\quad v = 20 \quad}$$

Translate each equation into words, and then solve the equation.

13. $7 + \frac{n}{2} = 10$

$\underline{\text{7 more than one half a number}}$

$\underline{\text{equals 10; } n = 6}$

14. $4w - 9 = -5$

$\underline{\text{4 times a number, minus 9,}}$

$\underline{\text{equals } -5; w = 1}$

Solve.

1. $-31x - 18 + 3x = 38$ **2.** $15n + 16 + 4n = 130$ **3.** $h - 48 + 17h = 42$

$\underline{x = -2}$ $\underline{n = 6}$ $\underline{h = 5}$

4. $-6g + 7g - 7 = 9$ **5.** $16 - 12a - 13a = -9$ **6.** $8y + 43 - 7y = -15$

$\underline{g = 16}$ $\underline{a = 1}$ $\underline{y = -58}$

7. $4(c - 3) - 6 = 10$ **8.** $3.8(s - 6) + 4.6 = -22$ **9.** $18(m + \frac{4}{9}) - 16 = 118$

$\underline{c = 7}$ $\underline{s = -1}$ $m = 7$

10. $\dfrac{17u - 24}{18} = \dfrac{5}{9}$ **11.** $\dfrac{0.4n - 1}{7} = 5$ **12.** $\dfrac{18 - 4t}{0.5} = 20$

$\underline{u = 2}$ $\underline{n = 90}$ $\underline{t = 2}$

13. $\dfrac{1.4m - 4.5}{1.5} = 8.2$ **14.** $\dfrac{\frac{1}{3}s - 2}{5} = -2$ **15.** $\dfrac{5.6 - 2a + 1.4}{1.2} = 4.5$

$\underline{m = 12}$ $\underline{s = -24}$ $\underline{a = 0.8}$

Practice C

Solving Equations with Variables on Both Sides

Group the terms with variables on one side of the equal sign and simplify.

1. $15t = 17 + 8t - 24$

$$\underline{\quad 7t = -7 \quad}$$

2. $6a - 42 = 2a + a$

$$\underline{\quad -42 = -3a \quad}$$

3. $6k - k = 27 - 4k$

$$\underline{\quad 9k = 27 \quad}$$

4. $-5f + 40 = 5f + 30$

$$\underline{\quad 10 = 10f \quad}$$

5. $\frac{9}{10}m - 28 = \frac{7}{10}m + 12$

$$\underline{\quad \frac{1}{5}m = 40 \quad}$$

6. $\frac{8}{15}x = 8 + \frac{2}{15}x - \frac{4}{15}x$

$$\underline{\quad \frac{2}{3}x = 8 \quad}$$

Solve. Check each answer.

7. $18r - 2 - 12r = -6r - 26$

$$\underline{\quad r = -2 \quad}$$

8. $10 + 8c + 15 = -2c - 40$

$$\underline{\quad c = -6.5 \quad}$$

9. $-3w + 6 = 8w + 9 - 2w$

$$\underline{\quad w = -\frac{1}{3} \quad}$$

10. $0.8a - 6 = -0.6a + 22$

$$\underline{\quad a = 20 \quad}$$

11. $\frac{1}{2}n - 1\frac{5}{12} = \frac{2}{3}n - 2\frac{1}{6}$

$$\underline{\quad n = 4\frac{1}{2} \quad}$$

12. $\frac{13}{15} - \frac{d}{5} = \frac{5}{6} + \frac{d}{3}$

$$\underline{\quad d = \frac{1}{16} \quad}$$