

LESSON **Practice B**
2-3 Solving Two-Step and Multi-Step Equations

Solve each equation. Check your answers.

1. $-4x + 7 = 11$

2. $17 = 5y - 3$

3. $-4 = 2p + 10$

4. $3m + 4 = 1$

5. $12.5 = 2g - 3.5$

6. $-13 = -h - 7$

7. $-6 = \frac{y}{5} + 4$

8. $\frac{7}{9} = 2n + \frac{1}{9}$

9. $-\frac{4}{5}t + \frac{2}{5} = \frac{2}{3}$

10. $-(x - 10) = 7$

11. $-2(b + 5) = -6$

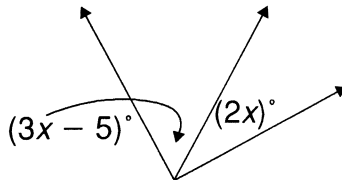
12. $8 = 4(q - 2) + 4$

13. If $3x - 8 = -2$, find the value of $x - 6$.

14. If $-2(3y + 5) = -4$, find the value of $5y$.

Answer each of the following.

15. The two angles shown form a right angle. Write and solve an equation to find the value of x .



16. For her cellular phone service, Vera pays \$32 a month, plus \$0.75 for each minute over the allowed minutes in her plan. Vera received a bill for \$47 last month. For how many minutes did she use her phone beyond the allowed minutes?

LESSON **Practice B**
2-4 Solving Equations with Variables on Both Sides

Solve each equation. Check your answers.

1. $3d + 8 = 2d - 17$

2. $2n - 7 = 5n - 10$

3. $p - 15 = 13 - 6p$

4. $-t + 5 = t - 19$

5. $15x - 10 = -9x + 2$

6. $1.8r + 9 = -5.7r - 6$

7. $2y + 3 = 3(y + 7)$

8. $4n + 6 - 2n = 2(n + 3)$

9. $6m - 8 = 2 + 9m - 1$

10. $-v + 5 + 6v = 1 + 5v + 3$

11. $2(3b - 4) = 8b - 11$

12. $5(r - 1) = 2(r - 4) - 6$

Answer each of the following.

13. Janine has job offers at two companies. One company offers a starting salary of \$28,000 with a raise of \$3000 each year. The other company offers a starting salary of \$36,000 with a raise of \$2000 each year.

a. After how many years would Janine's salary be the same with both companies?

b. What would that salary be?

14. Xian and his cousin both collect stamps. Xian has 56 stamps, and his cousin has 80 stamps. Both have recently joined different stamp-collecting clubs. Xian's club will send him 12 new stamps per month, and his cousin's club will send him 8 new stamps per month.

a. After how many months will Xian and his cousin have the same number of stamps?

b. How many stamps will that be?
