

GUIDED PRACTICE

1. **Vocabulary** Describe a *solution of a system of linear equations*.

SEE EXAMPLE 1
 p. 383

Tell whether the ordered pair is a solution of the given system.

2. $(2, -2); \begin{cases} 3x + y = 4 \\ x - 3y = -4 \end{cases}$

3. $(3, -1); \begin{cases} x - 2y = 5 \\ 2x - y = 7 \end{cases}$

4. $(-1, 5); \begin{cases} -x + y = 6 \\ 2x + 3y = 13 \end{cases}$

SEE EXAMPLE 2
 p. 384

Solve each system by graphing. Check your answer.

5. $\begin{cases} y = \frac{1}{2}x \\ y = -x + 3 \end{cases}$

6. $\begin{cases} y = x - 2 \\ 2x + y = 1 \end{cases}$

7. $\begin{cases} -2x - 1 = y \\ x + y = 3 \end{cases}$

SEE EXAMPLE 3
 p. 385

8. To deliver mulch, Lawn and Garden charges \$30 per cubic yard of mulch plus a \$30 delivery fee. Yard Depot charges \$25 per cubic yard of mulch plus a \$55 delivery fee. For how many cubic yards will the cost be the same? What will that cost be?

PRACTICE AND PROBLEM SOLVING

Tell whether the ordered pair is a solution of the given system.

9. $(1, -4); \begin{cases} x - 2y = 8 \\ 4x - y = 8 \end{cases}$

10. $(-2, 1); \begin{cases} 2x - 3y = -7 \\ 3x + y = -5 \end{cases}$

11. $(5, 2); \begin{cases} 2x + y = 12 \\ -3y - x = -11 \end{cases}$

Solve each system by graphing. Check your answer.

12. $\begin{cases} y = \frac{1}{2}x + 2 \\ y = -x - 1 \end{cases}$

13. $\begin{cases} y = x \\ y = -x + 6 \end{cases}$

14. $\begin{cases} -2x - 1 = y \\ x = -y + 3 \end{cases}$

15. $\begin{cases} x + y = 2 \\ y = x - 4 \end{cases}$

16. **Multi-Step** Angelo runs 7 miles per week and increases his distance by 1 mile each week. Marc runs 4 miles per week and increases his distance by 2 miles each week. In how many weeks will Angelo and Marc be running the same distance? What will that distance be?

17. **School** The school band sells carnations on Valentine's Day for \$2 each. They buy the carnations from a florist for \$0.50 each, plus a \$16 delivery charge.

- Write a system of equations to describe the situation.
- Graph the system. What does the solution represent?
- Explain whether the solution shown on the graph makes sense in this situation. If not, give a reasonable solution.

MULTI-STEP TEST PREP



18. This problem will prepare you for the Multi-Step Test Prep on page 412.
- The Warrior baseball team is selling hats as a fund-raiser. They contacted two companies. Hats Off charges a \$50 design fee and \$5 per hat. Top Stuff charges a \$25 design fee and \$6 per hat. Write an equation for each company's pricing.
 - Graph the system of equations from part a. For how many hats will the cost be the same? What is that cost?
 - Explain when it is cheaper for the baseball team to use Top Stuff and when it is cheaper to use Hats Off.