LESSON 7.5

Practice B

For use with pages 426–431

Match the graph with its linear system. Does the system have exactly one solution, no solution, or infinitely many solutions?
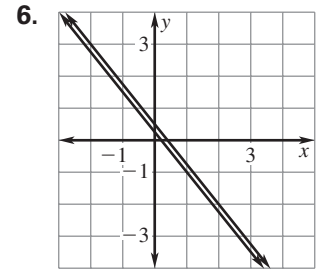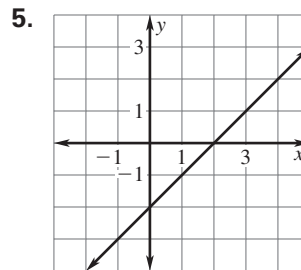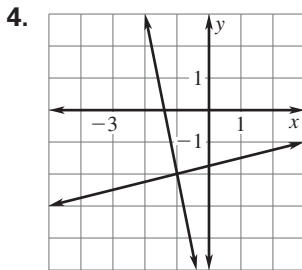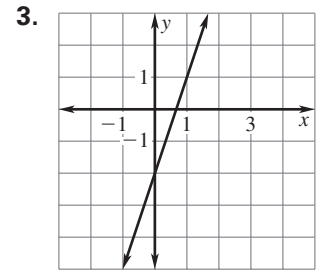
A. $-2x + y = 6$

$-4x + 2y = -6$

B. $x - 4y = 7$

$5x + y = -7$

C. $-9x + 3y = -6$

$-3x + y = -2$

D. $5x + 4y = 2$

$-5x - 4y = -1$

E. $-2x + 3y = -6$

$2x + 3y = 0$

F. $x - y = 2$

$7x - 7y = 14$

1.

2.

3.

4.

5.

6.
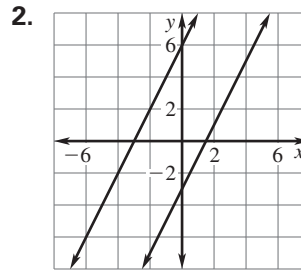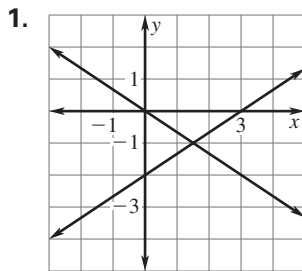
Use the substitution method or linear combinations to solve the linear system and tell how many solutions the system has.

7. $-8x + 8y = -6$

$3x - 3y = 8$

8. $-6x - 6y = -12$

$-2x - 2y = -4$

9. $-4x - 2y = 2$

$4x - 2y = 18$

10. $6x - 4y = -6$

$3x + 2y = 1$

11. $3x - 2y = -5$

$-9x + 6y = 15$

12. $x + 3y = -3$

$\frac{1}{3}x + y = 1$

Use the graphing method to solve the linear system and tell how many solutions the system has.

13. $2x + y = 7$

$4x + 2y = -10$

14. $-2x + 3y = 18$

$-2x + 3y = -18$

15. $-x + 4y = -3$

$3x - 12y = 3$

16. $6x - 5y = 3$

$-2x + \frac{5}{3}y = 1$

17. $x - 7y = 10$

$-6x + 4y = -22$

18. $\frac{1}{2}x + y = -2$

$\frac{3}{2}x + 3y = 6$

19. *Revenue and Cost*   The matrix gives the revenue and cost of running a business from 1997 to 2000. Construct two scatter plots, one for revenue and one for cost. Then find the line that best fits each scatter plot.

20. *Profit*   Profit can be defined as revenue minus cost. What does the graph from Exercise 19 tell you about the business' profit from 1997 to 2000?

Amount (in $1000)

$$\begin{array}{c} \quad \text{Revenue} \quad \text{Cost} \\ \begin{array}{c} 1997 \\ 1998 \\ 1999 \\ 2000 \end{array} \begin{bmatrix} 50 & 25 \\ 100 & 75 \\ 150 & 125 \\ 200 & 175 \end{bmatrix} \end{array}$$