

Practice C

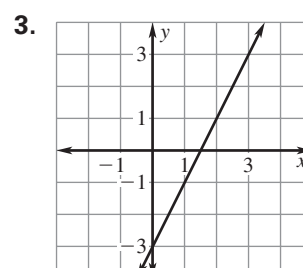
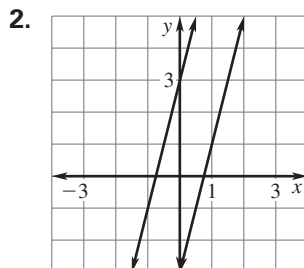
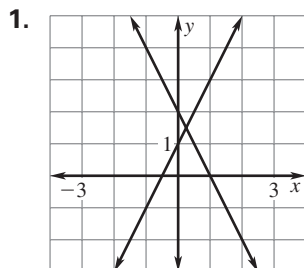
For use with pages 426–431

Match the graph with its linear system. Does the system have exactly one solution, no solution, or infinitely many solutions?

A. $-4x + y = 3$
 $-8x + 2y = -6$

B. $-2x + y = 1$
 $2x + y = 2$

C. $-6x + 3y = -9$
 $-4x + 2y = -6$



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

4. $-8x + 8y = -16$
 $5x - 5y = 8$

5. $6x - 6y = -14$
 $3x - 3y = -7$

6. $3x - 2y = 0$
 $\frac{3}{2}x - y = 0$

7. $-5x + 4y = 1$
 $4x - 5y = 1$

8. $3x - y = -2$
 $-15x + 5y = 0$

9. $-2x + 4y = 1$
 $\frac{3}{2}x - 3y = \frac{3}{4}$

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

10. $2x - 6y = 5$
 $3x - 9y = 2$

11. $-2x + 5y = -18$
 $-2x + 5y = 18$

12. $2x - y = 3$
 $x - \frac{1}{2}y = \frac{3}{2}$

13. $8x - 5y = 3$
 $-2x + \frac{5}{4}y = \frac{3}{4}$

14. $-3x + 4y = -8$
 $-4x - 3y = 6$

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

16. **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.

Amount (in \$1000)
 Revenue Cost

1997	58	33
1998	105	80
1999	154	129
2000	209	184

17. **Profit** Profit can be defined as revenue minus cost. What does the graph from Exercise 16 tell you about the business' profit from 1997 to 2000?

18. **Traveling Time** You pick up your mother at work and then drive to your sister's out-of-town soccer game. Your total trip takes 2 hours to drive 110 miles at an average rate of 55 miles per hour. Can you determine how long it takes to get to your mother's office or how much longer it takes to get to the soccer field from her office? If yes, solve. If not, explain why? Use the verbal model to help answer the question.

Time from home to mother's office	+	Time from office to soccer field	=	Total trip time
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Average rate	·	Time from home to mother's office	+	Average rate	·	Time from office to soccer field	=	Total distance
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