

# 4.1–4.2 Quiz

Match the system of linear equations with the corresponding graph. Use the graph to estimate the solution. Check your solution. (Section 4.1)

1.  $y = x - 2$

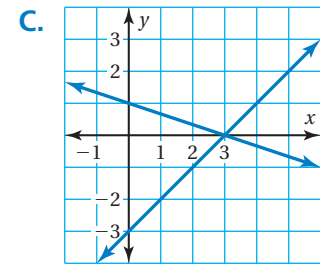
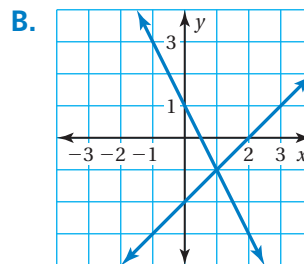
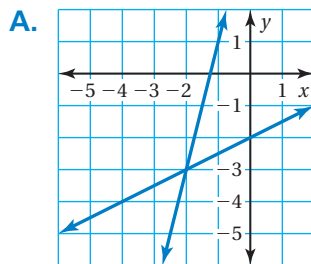
$y = -2x + 1$

2.  $y = x - 3$

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

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

$y = 4x + 5$



Solve the system of linear equations by graphing. (Section 4.1)

4.  $y = 2x - 3$

$y = -x + 9$

5.  $6x + y = -2$

$y = -3x + 1$

6.  $4x + 2y = 2$

$3x = 4 - y$

Solve the system of linear equations by substitution. Check your solution. (Section 4.2)

7.  $y = x - 8$

$y = 2x - 14$

8.  $x = 2y + 2$

$2x - 5y = 1$

9.  $x - 5y = 1$

$-2x + 9y = -1$

10. **MOVIE CLUB** Members of a movie rental club pay a \$15 annual membership fee and \$2 for new release movies. Nonmembers pay \$3 for new release movies. (Section 4.1)

- Write a system of linear equations that represents this situation.
- When is it beneficial to have a membership?

11. **NUMBER SENSE** The sum of two numbers is 38. The greater number is 8 more than the other number. Find each number. Use a system of linear equations to justify your answer. (Section 4.1)

12. **VOLLEYBALL** The length of a sand volleyball court is twice its width. The perimeter is 180 feet. Find the length and width of the sand volleyball court. (Section 4.2)

13. **MEDICAL STAFF** A hospital employs a total of 77 nurses and doctors. The ratio of nurses to doctors is 9 : 2. How many nurses are employed at the hospital? How many doctors are employed at the hospital? (Section 4.2)

