

Practice A

For use with pages 388-395

Decide whether each ordered pair is a solution of the system of linear equations.

1. (1, 1), (-1, 0)

$2x + y = 3$

$x - 2y = -1$

4. (-6, -4), (3, -1)

$x - 3y = 6$

$2x - y = -8$

2. (-2, 4), (3, -4)

$4x + y = -4$

$-x - y = 1$

5. (-3, -4), (-1, 4)

$-4x + y = 8$

$5x - 3y = -3$

3. (5, 4), (4, 1)

$x - y = 3$

$3x - y = 11$

6. (0, -2), (-6, 2)

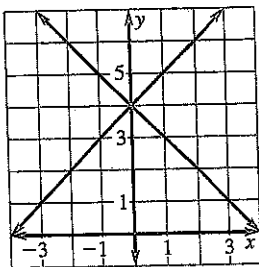
$-2x - 3y = 6$

$3x + 4y = -10$

Use the graph to estimate the solution of the linear system. Check your solution algebraically.

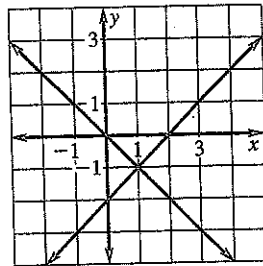
7. $-x + y = 4$

$x + y = 4$



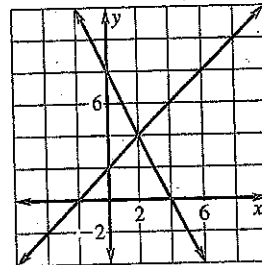
8. $x + y = 0$

$-x + y = -2$



9. $-x + y = 2$

$2x + y = 8$



Use the graph-and-check method to solve the linear system.

10. $x = 6$

$y = -2$

11. $y = x - 2$

$y = -x + 4$

12. $y = -2x - 4$

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

13. $3x + y = 6$

$-x + y = -2$

14. $-2x + y = 1$

$y = 5$

15. $x + 2y = 6$

$-3x + y = 10$

16. **Juice** You bought 12 1-gallon bottles of apple and orange juice for a school dance. The apple juice was on sale for \$1.00 per 1-gallon bottle. The orange juice was \$1.50 per 1-gallon bottle. You spent \$15.00. Assign labels to the verbal model below. Write an algebraic model. How many bottles of each type of juice did you buy?

| | | | | |
|----------------------------------|---|-----------------------------------|---|-------------------------|
| Number of bottles of apple juice | + | Number of bottles of orange juice | = | Total number of bottles |
|----------------------------------|---|-----------------------------------|---|-------------------------|

| | | | | | | | | |
|------------------------------|---|----------------------------------|---|-------------------------------|---|-----------------------------------|---|-------------|
| Price per apple juice bottle | · | Number of bottles of apple juice | + | Price per orange juice bottle | · | Number of bottles of orange juice | = | Total price |
|------------------------------|---|----------------------------------|---|-------------------------------|---|-----------------------------------|---|-------------|

17. **Books** In Jan's personal library, 40 of her 120 books are paperback; the rest are hardcover. If Jan bought 100% of the paperbacks new and 30% of the hardcover books at used book sales, how many hardcover books are new? How many hardcover books are used?

Practice B

For use with pages 389–395

Decide whether the ordered pair is a solution of the system of linear equations.

1. (1, 1), (0, 3)

$2x + y = 3$

$x - 2y = -1$

2. (2, 4), (-3, 8)

$4x + y = -4$

$-x - y = 1$

3. (-5, -2), (4, 1)

$x - y = 3$

$3x - y = 11$

4. (-6, -4), (-4, 0)

$x - 3y = 6$

$2x - y = -8$

5. (-3, -4), (3, 6)

$-4x + y = 8$

$5x - 3y = -3$

6. (3, -4), (-6, 2)

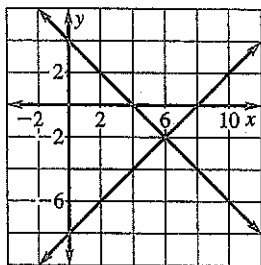
$-2x - y = 6$

$3x + 4y = -10$

Use the graph to estimate the solution of the linear system. Check your solution algebraically.

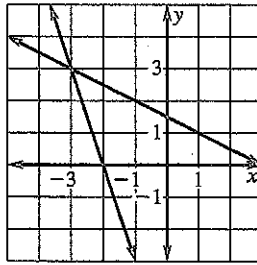
7. $-x + y = -8$

$x + y = 4$



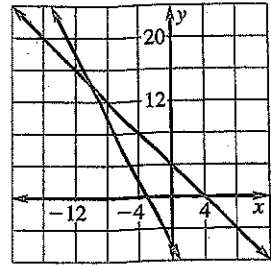
8. $3x + y = -6$

$-x - 2y = -3$



9. $4x + 2y = -12$

$2x + 2y = 8$



Use the graph-and-check method to solve the linear system.

10. $x = 6$

$y = -3$

11. $y = x - 2$

$y = -x - 4$

12. $y = 2x - 4$

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

13. $-3x + y = 6$

$-x + y = -2$

14. $x + 2y = -6$

$-3x + y = -10$

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

$y = x + 4$

16. **Juice** You bought 12 1-gallon bottles of apple and orange juice for a school dance. The apple juice was on sale for \$1.00 per 1-gallon bottle. The orange juice was \$1.75 per 1-gallon bottle. You spent \$15.00. Assign labels to the verbal model below. Write an algebraic model. How many bottles of each type of juice did you buy?

| | | | | |
|----------------------------------|---|-----------------------------------|---|-------------------------|
| Number of bottles of apple juice | + | Number of bottles of orange juice | = | Total number of bottles |
|----------------------------------|---|-----------------------------------|---|-------------------------|

| | | | | | | | | |
|------------------------------|---|----------------------------------|---|-------------------------------|---|-----------------------------------|---|-------------|
| Price per apple juice bottle | · | Number of bottles of apple juice | + | Price per orange juice bottle | · | Number of bottles of orange juice | = | Total price |
|------------------------------|---|----------------------------------|---|-------------------------------|---|-----------------------------------|---|-------------|

17. **Baseball Outs** In a game, 18 of a baseball team's 27 outs were fly balls. Fifty percent of the outs made by infielders and 100% of the outs made by outfielders were fly balls. How many outs were made by infielders? How many outs were made by outfielders? (Hint: Write one equation for the total number of outs and another equation for the number of fly ball outs.)