

Practice C

For use with pages 405–410

Tell which equation you would use to isolate a variable. Explain your reasoning.

1. $3x - y = -15$

$2x + y = 0$

2. $-2a + 4b = 6$

$3a - b = 1$

3. $m - 5n = 18$

$2m - 3n = -13$

Use the substitution method to solve the linear system.

4. $y = x - 4$

$3x - y = -8$

5. $y = x + 3$

$-7x - y = 1$

6. $4x + y = 12$

$y = -8$

7. $-3x = 9$

$2x + y = -13$

8. $x - 5y = -10$

$y = -2x - 9$

9. $x - y = -7$

$6x - y = -2$

10. $-3x + y = -18$

$x - y = 14$

11. $-x + 5y = -7$

$-x - 6y = 15$

12. $5x + 3y = 1$

$x + 6y = 2$

13. $-3x + y = -3$

$2x - 5y = -11$

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

$3x - y = -7$

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

$2x + 3y = 10$

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

$x + 9y = -6$

17. $x - \frac{3}{4}y = 1$

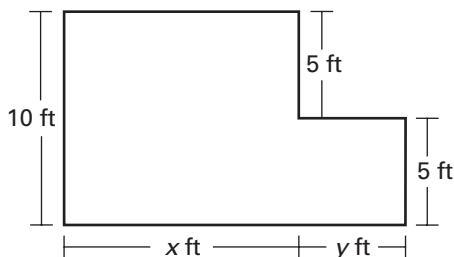
$-2x + y = -\frac{3}{2}$

18. $\frac{1}{10}x - \frac{2}{5}y = 2$

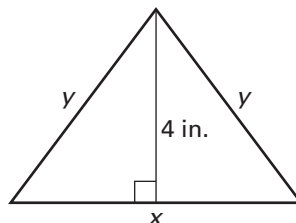
$\frac{1}{2}x - y = 10$

19. **Mowing and Shoveling** Last year you mowed grass and shoveled snow for 10 households. You earned \$200 per household mowing for the entire season and \$180 per household shoveling for the entire season. If you earned a total of \$1880 last year, how many households did you mow and shovel for?

20. **Room Dimensions** The area of the room shown below is 140 square feet. The perimeter of the room is 52 feet. Find x and y .



21. **Dimensions of a Triangle** The perimeter of an isosceles triangle is 16 inches. The area of the triangle is 12 square inches. What are the lengths of the sides of the isosceles triangle?



22. **Dimensions of a Metal Sheet** A rectangular hole $\frac{3}{4}$ centimeters wide and x centimeters long is cut in a rectangular sheet of metal $\frac{7}{2}$ centimeters wide and y centimeters long. The length of the hole is 5 centimeters less than the length of the metal sheet. After the hole is cut, the area of the remaining metal is 23 cm^2 . Find the length of the hole and the length of the metal sheet.

