

Practice B

For use with pages 405–410

Solve for the indicated variable.

1. $5x + y = -8$; y

2. $6x - y = 4$; y

3. $x + 3y = 7$; x

4. $-2x + 4y = 8$; x

5. $-3x - 3y = 9$; y

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

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

7. $4x - y = -6$

8. $2a + 4b = 10$

9. $-m + 5n = 16$

$2x + y = 0$

$3a - b = 1$

$-2m + 3n = 4$

Use the substitution method to solve the linear system.

10. $y = x + 3$

11. $4x + y = 9$

12. $3x = 9$

$3x - y = 5$

$y = -7$

$-2x + y = -8$

13. $x - 2y = -13$

14. $x - y = 10$

15. $4x + y = 2$

$y = -2x - 6$

$5x - y = -6$

$x - y = -17$

16. $-x + 3y = 4$

17. $3x + 2y = 8$

18. $x - 5y = -3$

$x + 6y = 14$

$x + 4y = -4$

$4x - 3y = 5$

19. $2x + 5y = 4$

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

21. $\frac{1}{3}x + \frac{5}{6}y = 1$

$x + 5y = 7$

$2x + 3y = 9$

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

- 22. 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? Assign labels to the verbal model below. Write and solve an algebraic model.

Number of households mow for	+	Number of households shovel for	=	Total number of households
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Earnings per household mowing	·	Number of households mow for	+	Earnings per household shoveling	·	Number of households shovel for	=	Total earnings
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- 23. Dimensions of a Metal Sheet** A rectangular hole 2 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 1 centimeter less than the length of the metal sheet. After the hole is cut, the area of the remaining metal is 11 cm^2 . Find the length of the hole and the length of the metal sheet.

