

Practice A

For use with pages 405–410

Solve for the indicated variable.

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

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

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. $3x - y = 5$

8. $-2a + b = 7$

9. $2m + 5n = 14$

$2x + y = 0$

$3a + b = -8$

$2m - 3n = 6$

Use the substitution method to solve the linear system.

10. $y = x + 2$

11. $y = x - 1$

12. $2x + y = 3$

$2x + y = 8$

$2x - y = 0$

$y = 7$

13. $3x - y = -2$

14. $x - 2y = 8$

15. $y = -3x - 1$

$y = 2x + 3$

$y = -4x + 5$

$x - 3y = 3$

16. $x + y = -3$

17. $x - y = 4$

18. $3x + y = 0$

$3x + y = 3$

$x - 2y = 10$

$x - y = 4$

19. $3x - y = 9$

20. $x - 2y = 0$

21. $2x - y = 3$

$2x + y = 6$

$3x + y = 0$

$3x - y = 4$

22. **Driving** Your brother and sister took turns driving on a 580-mile trip that took 10 hours to complete. Your brother drove at a constant speed of 55 miles per hour and your sister drove at a constant speed of 60 miles per hour. Assign labels to the verbal model below. Write and solve an algebraic model. How long did each person drive?

Number of hours brother drove	+	Number of hours sister drove	=	Total number of hours
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Brother's speed	·	Number of hours brother drove	+	Sister's speed	·	Number of hours sister drove	=	Total number of miles
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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 5 centimeters wide and y centimeters long. The length of the hole is 8 centimeters less than the length of the metal sheet. After the hole is cut, the area of the remaining metal is 49 cm^2 . Find the length of the hole and the length of the metal sheet.

