

8-2 Exercises



**Extra Help
On the Web**

Look for worked-out examples at the Prentice Hall Web site.

www.phschool.com

A

Solve using the substitution method.

1. $x + y = 4$
 $y = 2x + 1$
2. $x + y = 10$
 $y = x + 8$
3. $x = y - 1$
 $y = 4 - 2x$
4. $x = y + 6$
 $y = -2 - x$
5. $y = 2x - 5$
 $3y - x = 5$
6. $y = 2x + 1$
 $x + y = -2$
7. $x = -2y$
 $x = 2 - 4y$
8. $r = -3s$
 $r = 10 - 4s$
9. $x = 3y - 4$
 $2x - y = 7$
10. $s + t = -4$
 $s - t = 2$
11. $x - y = 6$
 $x + y = -2$
12. $y - 2x = -6$
 $2y - x = 5$
13. $x - y = 5$
 $x + 2y = 7$
14. $2x + 3y = -2$
 $2x - y = 9$
15. $x + 2y = 10$
 $3x + 4y = 8$
16. $x - y = -3$
 $2x + 3y = -6$
17. $3b + 2a = 2$
 $-2b + a = 8$
18. $r - 2s = 0$
 $4r - 3s = 15$
19. $y - 2x = 0$
 $3x + 7y = 17$
20. $x - 3y = 7$
 $-3x + 16y = 28$
21. $8x + 4y = 6$
 $4x = 3 - y$

Translate to a system of equations and solve.

22. The sum of two numbers is 27. One number is 3 more than the other. Find the numbers.
23. The sum of two numbers is 36. One number is 2 more than the other. Find the numbers.
24. Find two numbers whose sum is 58 and whose difference is 16.
25. Find two numbers whose sum is 66 and whose difference is 8.
26. The difference between two numbers is 16. Three times the larger number is seven times the smaller. What are the numbers?
27. The difference between two numbers is 18. The sum of twice the smaller number and three times the larger is 74. What are the numbers?

B

Solve each system of equations by using the substitution method and by graphing. Explain your results.

28. $3y + 3x = 14$
 $y = -x + 4$
29. $y = x + 5$
 $-3x + 3y = 15$
30. Determine whether $(2, -3)$ is a solution of this system of equations.
 $x + 3y = -7$ $-x + y = -5$ $2x - y = 1$

