Name _____ Class _____ Date _____

Practice 6-2

Solving Systems Using Substitution

Graph each system to estimate the solution. Then use substitution to find the exact solution of the system.

1. $y = x$
$y = -x + 2$

2. $y = x + 4$
$y = 3x$

3. $y = 3x - 10$
$y = 2x - 5$

4. $x = -2y + 1$
$x = y - 5$

5. $y = 5x + 5$
$y = 15x - 1$

6. $y = x - 3$
$y = -3x + 25$

Solve each system using substitution. Write *no solution* or *infinitely many solutions* where appropriate.

7. $y = x - 7$
$2x + y = 8$

8. $y = 3x - 6$
$-3x + y = -6$

9. $x + 2y = 200$
$x = y + 50$

10. $3x + y = 10$
$y = -3x + 4$

11. $y = 2x + 7$
$y = 5x + 4$

12. $3x - 2y = 0$
$x + y = -5$

13. $4x + 2y = 8$
$y = -2x + 4$

14. $6x - 3y = 6$
$y = 2x + 5$

15. $2x + 4y = -6$
$x - 3y = 7$

16. $5x - 3y = -4$
$x + y = -4$

17. $y = -\frac{2}{3}x + 4$
$2x + 3y = -6$

18. $2x + 3y = 8$
$\frac{3}{2}y = 4 - x$

19. $3x - y = 4$
$2x + y = 16$

20. $x + y = 0$
$x = y + 4$

21. $5x + 2y = 6$
$y = -\frac{5}{2}x + 1$

22. $2x + 5y = -6$
$4x + y = -12$

23. $4x + 3y = -3$
$2x + y = -1$

24. $y = -\frac{2}{3}x + 1$
$4x + 6y = 6$

25. $5x - 6y = 19$
$4x + 3y = 10$

26. $2x + y = 6.6$
$5x - 2y = 0.3$

27. $2x - 4y = 3.8$
$3x - y = 17.7$

28. $3x + 4y = 8$
$4.5x + 6y = 12$

29. $3x - 4y = -5$
$x = y + 2$

30. $y = \frac{1}{3}x + 10$
$x = 3y + 6$

31. $2x + 5y = 62$
$3x - y = 23.3$

32. $-5x + y = 6$
$2x - 3y = 60$

33. $x = \frac{3}{4}y - 6$
$y = \frac{4}{3}x + 8$

34. $5x + 6y = -76$
$x + 2y = -44$

35. $3x - 2y = 10$
$y = \frac{3}{2}x - 1$

36. $-3x + 2y = -6$
$-2x + y = 6$

37. At an ice cream parlor, ice cream cones cost $1.10 and sundaes cost $2.35. One day, the receipts for a total of 172 cones and sundaes were $294.20. How many cones were sold?

38. You purchase 8 gal of paint and 3 brushes for $152.50. The next day, you purchase 6 gal of paint and 2 brushes for $113.00. How much does each gallon of paint and each brush cost?