

Chapter 5 Review

Solve systems graphically. (5.1)

1. $y = x + 4$
 $y = -x + 8$

2. $y = 4x - 7$
 $x + y + 9 = 0$

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

4. $4y = 5x - 12$
 $x + 5y = -15$

5. $3y = x + 6$
 $5x + 10y + 30 = 0$

6. $y = x + 1$
 $3x + y = 5$

Solve systems graphically. Name figure formed. (5.1)

7. $x = -5$
 $x + y = 3$
 $y = 2x + 2$

8. $y = 4x + 12$
 $2y = -3x - 8$
 $5x + y = -1$

9. $x = -4$
 $y = -4$
 $2x + y + 2.5 = 0$

10. $y = 5$
 $y = -2$
 $x = 5$
 $x = -1$

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

12. $2y = 4x + 10$
 $y + 3x = 8$
 $y = x - 2$
 $y + 2x + 5 = 0$

Solve each system by substitution. (5.2)

13. $x = y - 6$
 $2x + y + 10 = 0$

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

15. $3y = x - 5$
 $3x + 2y = -7$

16. $2x + y + 4 = 0$
 $3y + 4x + 12 = 0$

17. $2y = 9x + 13$
 $y = -6x + 3$

18. $2y = x - 8$
 $x + y = 0$

Solve each system by algebraic addition. (5.3)

19. $x = y - 3$
 $x + y + 5 = 0$

20. $3y = x + 8$
 $y = -2$

21. $y = 2x - 5$
 $2x + 4y = -9$

22. $x + 2y + 7 = 0$
 $3y + 4x + 22 = 0$

23. $7y = 5x + 17$
 $3y = -x + 12$

24. $3y = 2x - 8$
 $6x + 4y + 11 = 0$

Solve (5.4)

25. A boat travels up a river against a 8 miles per hour current for 1.8 hours. Coming back it travels the same distance in 0.6 hours. Find the speed of the boat in still waters.

26. A concert hall sold 4578 tickets. Tickets are \$35 for section A and \$27 for section B. If the total gate was \$134,374, how many tickets were sold for section A, how many for section B?

27. A car rental company charges \$0.44 per mile for a convertible and \$0.24 per mile for a coupe. If the daily rate for the coupe is \$40 and the daily rate for the convertible is \$20, how many miles must be driven to make the cost of both automobiles the same?

Find the solution area. (5.5)

28. $4y \leq 2x + 15$
 $y < -5$

29. $4y \leq 3x - 1$
 $4x + 5y \leq -2$

30. $5y \leq 6x + 7$
 $-x + y + 3 \geq 0$
 $4x - 3y - 1 < 3$

31. $5x \leq 3y + 12$
 $2x + y > 5$

32. $-4x < -5y - 10$
 $y < 2x - 2$

33. $7x + 2y + 6 \leq 0$
 $x + 2y + 8 \leq 0$
 $5x - 5y - 3 > 6$

34. $y \geq 4x + 11$
 $5y \geq -x + 12$

35. $y > 2x - 3$
 $5x + 8y + 16 > 0$

36. $y < 3x + 4$
 $y \leq 2$
 $x + y > 2$
 $2x - 2y < 1$