Extra Practice

Chapter 6

6.1 **Solve the linear system by graphing. Check your solution.**

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

2. $y = 3x + 12$
$y = -4x - 2$

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

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

5. $3x - 2y = -5$
$4x + 3y = -18$

6. $\frac{2}{3}x + \frac{1}{3}y = \frac{16}{3}$
$-\frac{2}{5}x + y = \frac{8}{5}$

6.2 **Solve the linear system using substitution.**

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

8. $y = 3x + 5$
$x + y = -1$

9. $x = 2y - 5$
$2x - y = 11$

10. $2x - y = 0$
$x + 3y = -56$

11. $1.5x - 2.5y = 22$
$x - y = 10$

12. $\frac{1}{2}x + \frac{3}{4}y = 5$
$x - \frac{1}{2}y = 6$

Solve the linear system using elimination.

6.3 **13.** $x + 2y = 2$
$-x + 3y = 13$

14. $3x - 4y = -16$
$x - 4y = -40$

15. $3x + 2y = -31$
$5x + 2y = -49$

16. $5x + 4y = 6$
$7x + 4y = 14$

17. $10y - 3x = -41$
$3x - 5y = 16$

18. $4x - 3y = 39$
$7y = 4x - 79$

6.4 **19.** $x + y = -3$
$5x + 7y = -9$

20. $5x + 2y = -19$
$10x - 7y = -16$

21. $8x - 3y = 61$
$2x - 5y = -23$

22. $4x - 3y = -2$
$6x + 4y = 31$

23. $5x - 2y = 53$
$2x + 6y = 11$

24. $15x - 8y = 6$
$25x - 12y = 16$

6.5 **Graph the linear system. Then use the graph to tell whether the linear system has *one solution*, *no solution*, or *infinitely many solutions*.**

25. $2x + y = -3$
$y = -2x + 5$

26. $2y - 4x = 10$
$-2y - 2x = 8$

27. $10x + 5y = -15$
$y = -2x - 3$

6.5 **Solve the linear system using substitution or elimination.**

28. $y - 3x = 5$
$x = y - 5$

29. $2y - 3x = 36$
$y = 3x - 12$

30. $5x + 5y = -32$
$3x + 3y = 14$

31. $4x + 6y = 11$
$y = -\frac{2}{3}x + 7$

32. $3y - 3x = 12$
$y = x - 4$

33. $x + 2y = -30$
$y = \frac{1}{2}x + 15$

6.6 **Graph the system of inequalities.**

34. $y \geq -5$
$y \leq -2$

35. $x \geq -3$
$y < 1$

36. $y < -2x - 3$
$x - y > -4$

37. $x + 4y \geq -8$
$y - 4x < 8$
$x > -1$

38. $x > 3$
$x < 5$
$y > -2$
$y \leq 0$

39. $x + y > 3$
$x - y > 5$
$x + 2y \leq 8$
$x - 5y > 10$