CHAPTER 5 CONTINUED

NAME _____ DATE _____

Cumulative Review

For use after Chapters 1–5

Solve the linear system. (3.2, 3.6)

37. $2x + 3y = 14$
$-x + 5y = 19$

38. $3x + 5y = 14$
$2x - 3y = -16$

39. $2x + 3y - z = 11$
$4x - y + 2z = -1$
$3x + 2y + 2z = 0$

Graph the system of linear inequalities. (3.5)

40. $y < x - 2$
$y > -3x + 1$

41. $y > 3x - 2$
$y > -2x + 1$

42. $3x + y \geq 5$
$-2x + y \leq 3$

Perform the indicated operation. (4.3)

43. $\begin{bmatrix} 1 & -3 \\ 6 & 2 \end{bmatrix} + 3\begin{bmatrix} -3 & 5 \\ 2 & 0 \end{bmatrix}$

Use Cramer's Rule to solve the system. (4.6)

44. $2x + 3y = 11$
$x - 4y = -11$

45. $-2x + 2y = 0$
$5x - 3y = 4$

46. $4x - 2y + 3z = 14$
$2x + y - 5x = 5$
$-3x - 2y + 5z = -7$

Use matrices to solve the linear system. (4.5)

47. $-2x + 4y = 22$
$3x - y = -13$

48. $3x - 2y = 7$
$5x + 4y = -3$

49. $x + 2y - 3z = 10$
$2x - 3y + 4z = -10$
$-2x + 3y - 5z = 13$

Graph the quadratic function. Label the vertex and the axis of symmetry. (5.1, 5.3)

50. $y = (x - 3)^2 + 5$

51. $y = 3(x - 1)(x + 1)$

52. $y = 3x^2 + 6x - 2$

Solve the equation. (5.3, 5.5)

53. $3(x - 5)^2 = 27$

54. $x^2 + 12x + 3 = 0$

55. $x^2 + 6x + 8 = 0$

Write the expression as a complex number in standard form. (5.4)

56. $(4 - 3i) - (2 + 5i)$

57. $(7 + 3i)(2 - i)$

58. $(-6 + 2i) + (3 - 5i)$

59. $(-3 - 2i)(4 + 5i)$

60. $\dfrac{3 + 2i}{4 - i}$

61. $\dfrac{4 + i}{4 - i}$

Review and Assess