

30. 
$$\frac{4x^{13} + 12x^9 - 11x^7}{4x^6}$$

33. 
$$\frac{3xyz + 6xyz^2 - 9x^3y^5z^7}{6xy}$$

31. 
$$\frac{9x^2y - 12x^3y^2 + 15y^3}{2xy^2}$$

34. 
$$\frac{6abc^3 - 5a^2b^3c^4 + 13ab^5c}{3ab^2c^3}$$

32. 
$$\frac{a^2b^2c - 6abc^2 + 5a^3b^5}{2abc^2}$$

Divida utilizando la división larga.

35. 
$$\frac{x^2 + 3x + 2}{x + 1}$$

38. 
$$\frac{2x^2 + 13x + 20}{x + 4}$$

41. 
$$\frac{x^2 + 6x + 3}{x + 1}$$

44. 
$$\frac{2c^2 + c + 1}{2c + 5}$$

47. 
$$\frac{4x^2 - 36}{2x - 6}$$

50. 
$$\frac{-a^3 - 6a^2 + 2a - 4}{a - 1}$$

53. 
$$(4a^3 - 5a) \div (2a - 1)$$

56. 
$$\frac{4b^5 - 18b^3 + 14b^2 + 18b - 21}{2b^2 - 3}$$

59. 
$$\frac{2c^4 - 8c^3 + 19c^2 - 33c + 15}{c^2 - c + 5}$$

36. 
$$\frac{x^2 + x - 20}{x + 5}$$

39. 
$$\frac{6x^2 + x - 2}{2x - 1}$$

42. 
$$\frac{a^2 - a - 17}{a + 3}$$

45. 
$$\frac{8x^2 + 6x - 25}{2x - 3}$$

48. 
$$\frac{16p^2 - 9}{4p + 3}$$

51. 
$$\frac{4y^3 + 12y^2 + 7y - 9}{2y + 3}$$

54. 
$$(2x^3 + 6x + 33) \div (x + 4)$$

57. 
$$\frac{3x^4 + 4x^3 - 32x^2 - 5x - 20}{3x^3 - 8x^2 - 5}$$

60. 
$$\frac{2y^5 + 2y^4 - 3y^3 - 15y^2 + 18}{2y^2 - 3}$$

37. 
$$\frac{6x^2 + 16x + 8}{3x + 2}$$

40. 
$$\frac{12x^2 - 17x - 7}{3x + 1}$$

43. 
$$\frac{2b^2 + b - 8}{b - 2}$$

46. 
$$\frac{8z^2 - 18z - 7}{4z + 1}$$

49. 
$$\frac{x^3 + 3x^2 + 5x + 4}{x + 1}$$

52. 
$$\frac{9b^3 - 3b^2 - 3b + 4}{3b + 2}$$

55. 
$$\frac{3x^5 + 2x^2 - 12x - 4}{x^2 - 2}$$

58. 
$$\frac{3a^4 - 9a^3 + 13a^2 - 11a + 4}{a^2 - 2a + 1}$$

Divida usando la división sintética.

61. 
$$(x^2 + 7x + 6) \div (x + 1)$$

63. 
$$(x^2 + 5x + 6) \div (x + 2)$$

65. 
$$(x^2 - 11x + 28) \div (x - 4)$$

67. 
$$(x^2 + 5x - 14) \div (x - 3)$$

69. 
$$(3x^2 - 7x - 10) \div (x - 4)$$

71. 
$$(4x^3 - 3x^2 + 2x) \div (x - 1)$$

73. 
$$(3c^3 + 7c^2 - 4c + 16) \div (c + 3)$$

75. 
$$(y^4 - 1) \div (y - 1)$$

77. 
$$\frac{x^4 + 16}{x + 4}$$

79. 
$$\frac{x^5 + x^4 - 9}{x + 1}$$

81. 
$$\frac{b^5 + 4b^4 - 14}{b + 1}$$

83. 
$$(3x^3 + 2x^2 - 4x + 1) \div \left(x - \frac{1}{3}\right)$$

85. 
$$(2x^4 - x^3 + 2x^2 - 3x + 7) \div \left(x - \frac{1}{2}\right)$$

62. 
$$(x^2 - 7x + 6) \div (x - 1)$$

64. 
$$(x^2 - 5x + 6) \div (x - 2)$$

66. 
$$(x^2 + 17x + 72) \div (x + 9)$$

68. 
$$(x^2 - 2x - 39) \div (x + 5)$$

70. 
$$(2b^2 - 9b + 1) \div (b - 6)$$

72. 
$$(z^3 - 7z^2 - 13z + 25) \div (z - 2)$$

74. 
$$(3y^4 - 25y^2 - 29) \div (y - 3)$$

76. 
$$(a^4 - 16) \div (a - 2)$$

78. 
$$\frac{z^4 + 81}{z + 3}$$

80. 
$$\frac{a^7 - 2a^6 + 13}{a - 2}$$

82. 
$$\frac{z^5 - 3z^3 - 7z}{z - 2}$$

84. 
$$(8x^3 - 6x^2 - 5x + 3) \div \left(x + \frac{3}{4}\right)$$

86. 
$$(9y^3 + 9y^2 - y + 2) \div \left(y + \frac{2}{3}\right)$$

Determine el residuo de las siguientes divisiones mediante el teorema del residuo. Si el divisor es un factor del dividendo, indíquelo.

87. 
$$(4x^2 - 5x + 6) \div (x - 2)$$

88. 
$$(-2x^2 + 3x - 2) \div (x + 3)$$

89. 
$$(x^3 - 2x^2 + 4x - 8) \div (x - 2)$$

90. 
$$(x^4 + 3x^3 + x^2 + 22x + 8) \div (x + 4)$$

91. 
$$(-2x^3 - 6x^2 + 2x - 4) \div \left(x - \frac{1}{2}\right)$$

92. 
$$(-5x^3 - 6) \div \left(x - \frac{1}{5}\right)$$