

Problemas 11.2

En los problemas 1 a 74, diferencie las funciones.

*1. $f(x) = 5$

*3. $y = x^6$

5. $y = x^{80}$

*7. $f(x) = 9x^2$

9. $g(w) = 8w^7$

11. $y = \frac{2}{3}x^4$

13. $f(t) = \frac{t^7}{25}$

15. $f(x) = x + 3$

17. $f(x) = 4x^2 - 2x + 3$

19. $g(p) = p^4 - 3p^3 - 1$

21. $y = x^3 - \sqrt{x}$

23. $y = -13x^3 + 14x^2 - 2x + 3$

24. $V(r) = r^8 - 7r^6 + 3r^2 + 1$

25. $f(x) = 2(13 - x^4)$

27. $g(x) = \frac{13 - x^4}{3}$

29. $h(x) = 4x^4 + x^3 - \frac{9x^2}{2} + 8x$

30. $k(x) = -2x^2 + \frac{5}{3}x + 11$

32. $p(x) = \frac{x^7}{7} + \frac{2x}{3}$

34. $f(x) = 2x^{-14/5}$

36. $y = 5x^3 - x^{-2/5}$

38. $y = \sqrt{x^7}$

40. $y = 4\sqrt[8]{x^2}$

42. $f(s) = 2s^{-3}$

44. $f(x) = 100x^{-3} + 10x^{1/2}$

46. $f(x) = \frac{2}{x^3}$

48. $y = \frac{1}{4x^5}$

50. $y = \frac{1}{x^2}$

52. $g(x) = \frac{7}{9x}$

54. $\Phi(x) = \frac{x^3}{3} - \frac{3}{x^3}$

56. $f(z) = 3z^{1/4} - 12z^2 - 8z^{-3/4}$

57. $q(x) = \frac{1}{\sqrt[3]{8x^2}}$

59. $y = \frac{2}{\sqrt{x}}$

61. $y = x^2\sqrt{x}$

63. $f(x) = x(3x^2 - 10x + 7)$

65. $f(x) = x^3(3x)^2$

67. $v(x) = x^{-2/3}(x + 5)$

69. $f(q) = \frac{3q^2 + 4q - 2}{q}$

71. $f(x) = (x + 1)(x + 3)$

73. $w(x) = \frac{x^2 + x^3}{x^2}$

2. $f(x) = \left(\frac{6}{7}\right)^{2/3}$

4. $f(x) = x^{21}$

6. $y = x^{5.3}$

8. $y = 4x^3$

10. $v(x) = x^e$

12. $f(p) = \sqrt{3}p^4$

14. $y = \frac{x^7}{7}$

16. $f(x) = 3x - 2$

18. $F(x) = 5x^2 - 9x$

20. $f(t) = -13t^2 + 14t + 1$

22. $y = -8x^4 + \ln 2$

26. $\phi(t) = 5(t^3 - 3^2)$

28. $f(x) = \frac{5(x^4 - 6)}{2}$

31. $f(x) = \frac{3x^4}{10} + \frac{7}{3}x^3$

33. $f(x) = x^{3/5}$

35. $y = x^{3/4} + 2x^{5/3}$

37. $y = 11\sqrt{x}$

*39. $f(r) = 6\sqrt[3]{r}$

41. $f(x) = x^{-4}$

43. $f(x) = x^{-3} + x^{-5} - 2x^{-6}$

45. $y = \frac{1}{x}$

*47. $y = \frac{8}{x^5}$

49. $g(x) = \frac{4}{3x^3}$

51. $f(t) = \frac{1}{2t}$

53. $f(x) = \frac{x}{7} + \frac{7}{x}$

55. $f(x) = -9x^{1/3} + 5x^{-2/5}$

58. $f(x) = \frac{3}{\sqrt[4]{x^3}}$

60. $y = \frac{1}{2\sqrt{x}}$

62. $f(x) = (2x^3)(4x^2)$

64. $f(x) = x^3(3x^6 - 5x^2 + 4)$

66. $s(x) = \sqrt[3]{x}(\sqrt[4]{x} - 6x + 3)$

68. $f(x) = x^{3/5}(x^2 + 7x + 11)$

70. $f(w) = \frac{w - 5}{w^5}$

72. $f(x) = x^2(x - 2)(x + 4)$

74. $f(x) = \frac{7x^3 + x}{6\sqrt{x}}$