

DERIVADAS

Hallar la derivada de las siguientes funciones:

1. $f(x) = \frac{3}{2}x^3 + \frac{2}{5}x^2 - \frac{4}{7}x - 5$

23. $f(x) = \frac{2x^3 - 3x^2 - 2x - 4}{2x^2 - 3x + 6}$

44. $f(x) = \frac{1 - 3x}{x} + (5x - 2)^3$

2. $f(x) = x \cdot (x + 2)$

45. $f(x) = \frac{x^2 - 3x}{2x - 5}$

3. $f(x) = x^2 \cdot (7 - 2x)$

24. $f(x) = \frac{2x - 5x^2 + x^3}{(2x - 8) \cdot (3x - 4)}$

46. $f(x) = 3^{5x^2 - 4x}$

4. $f(x) = (2x - 5) \cdot (4 - 3x)$

25. $f(x) = 2\sqrt[5]{x^4 - 1}$

47. $f(x) = 3^{5x} + e^x$

5. $f(x) = (-x^4 - 2) \cdot (5x - 7x^2)$

26. $f(x) = x^2 + \sqrt{x^3 - 2}$

48. $f(x) = 2x^{-3} - 3x^{-1}$

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

27. $f(x) = \sqrt{2x} + \sqrt[3]{x} - \frac{1}{x}$

49. $f(x) = (x^2 + 2) \cdot \ln(x^2 + 2)$

7. $f(x) = \frac{2x + 5}{3}$

28. $f(x) = \operatorname{sen}(5x - 3)$

50. $f(x) = \frac{1 - 3x}{x} + (5x - 2)^3$

8. $f(x) = \frac{2}{x - 3}$

29. $f(x) = \cos 3^x$

51. $f(x) = \frac{(3x^5 + 4)^3}{5x^3 - x}$

9. $f(x) = \frac{4}{x^2}$

30. $f(x) = \ln(7x + 2)$

52. $f(x) = \operatorname{sen}(x^2 - 1) + \cos 3x$

10. $f(x) = \frac{2x - 3}{3 - x}$

31. $f(x) = \cos(4 - 9x^2)$

53. $f(x) = \ln\left(\frac{x}{x - 1}\right)$

11. $f(x) = 6x^5 - 3x^4$

32. $f(x) = \sqrt{\frac{1-x}{1+x}}$

54. $f(x) = \sqrt{\operatorname{sen}(3x^4 - 2x)}$

12. $f(x) = (3 - 4x - 5x^2)^4$

33. $f(x) = x \cdot \sqrt{3x^2 - 1}$

55. $f(x) = \frac{1}{\operatorname{sen} 3x}$

13. $f(x) = \frac{x^8}{9} - \frac{x^5}{3}$

34. $f(x) = \sqrt[3]{\ln x}$

56. $f(x) = (\cos 2x)^3 - e^{2x-1}$

14. $f(x) = \frac{x^8}{9} - \frac{x^5}{3}$

35. $f(x) = \operatorname{sen} \frac{3}{x^2}$

57. $f(x) = \frac{e^{x-1}}{\operatorname{sen} x}$

15. $f(x) = (x^2 - 1)^3 \cdot (2x^2 - 3x + 2)^3$

36. $f(x) = \sqrt[4]{2^x}$

58. $f(x) = \sqrt[3]{\ln(x^2 - 1)}$

16. $f(x) = \frac{x^2 + 5}{x^2 + 6}$

37. $f(x) = \cos \sqrt[5]{3x}$

59. $f(x) = \sqrt[3]{2x - 1}$

17. $f(x) = \frac{x^4 - 3x^2 + 7x}{2x + 5}$

38. $f(x) = \ln(x^2 + 7)$

60. $f(x) = \frac{2 + 3x}{1 + \sqrt{x}}$

18. $f(x) = \frac{(2x+3)^3}{(3x^2 - 2x + 6)^2}$

39. $f(x) = \frac{x^2 + 1}{x^2 - 1}$

61. $f(x) = \frac{e^x - 1}{e^x + 1}$

19. $f(x) = \sqrt{x}$

40. $f(x) = x \cdot e^x$

62. $f(x) = (3x - 1) \cdot 2^{x-1}$

20. $f(x) = \frac{1+x}{1-x}$

41. $f(x) = \ln\left(\frac{2 - 5x^2}{4}\right)$

63. $f(x) = \log_2(x^3 - 2x + 1)$

21. $f(x) = \sqrt[4]{x - 5}$

42. $f(x) = \sqrt[3]{x^5}$

64. $f(x) = \log \frac{x}{x-1}$

22. $f(x) = \sqrt{3x} - \sqrt{3-x}$

43. $f(x) = e^{(3x^4 - 5x)^2}$