

DERIVADAS

Ejercicios

1. $y = 5x^6 - 3x^5 + 3x^3 - 2$

3. $y = 3x^{10} + 2\sqrt{x} + \frac{3}{x}$

5. $y = 4 \operatorname{sen} x - 3 \operatorname{cos} x$

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

9. $y = \cos(3x)$

11. $y = \operatorname{sen}(3x^2 - 2x)$

13. $y = \operatorname{sen}^3(2x^2)$

15. $y = 3 \operatorname{sen}^2(2x - 3)$

17. $y = \cos(\operatorname{sen} x)$

19. $y = \sqrt[3]{\cos^2 x}$

21. $y = \sqrt{x^2 - 3x}$

23. $y = (2\sqrt{x} - 3x)^3$

25. $y = \sqrt[3]{\operatorname{sen}(3x)}$

27. $y = (3x^2 - \sqrt{1-x^2})^3$

29. $y = \sqrt{\operatorname{sen}^3 x + (x-1)^3}$

31. $y = \frac{x}{5}$

33. $y = \frac{x^4 - 3x}{4}$

35. $y = \frac{(x^4 - 3x)^2}{3}$

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

39. $y = \sqrt{\frac{3}{x}}$

41. $y = \sqrt[3]{3x^2 - \operatorname{sen} x}$

43. $y = \ln(x^2 - 3x)$

45. $y = \log_2(3x^2)$

47. $y = 2^x$

49. $y = 3^{\operatorname{sen} x}$

51. $y = 3e^{x^2 - 3x}$

53. $y = 3 \operatorname{tg}^2 x$

55. $y = x^2 \cdot \ln x$

57. $y = x^4 \cdot e^{3x}$

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

4. $y = \sqrt{3} \cdot x^3 - \pi \cdot x + \sqrt{3}$

6. $y = 2\sqrt{x} + \frac{2}{x} + x^5$

8. $y = \frac{\pi}{2} \cdot \cos x - 3\sqrt{x}$

10. $y = \cos^2(x^3)$

12. $y = \cos(x^2)$

14. $y = \cos^4(3x^4)$

16. $y = \cos^5(3x^2)$

18. $y = \cos^2(\operatorname{sen}(3x))$

20. $y = \sqrt[3]{\cos^2(x^2)}$

22. $y = \sqrt[3]{(x^2 - 3x)^2}$

24. $y = \sqrt[3]{\operatorname{sen}^2 x}$

26. $y = \sqrt{3x - \operatorname{sen} x}$

28. $y = \operatorname{sen}(\sqrt{3x^2 - 5x})$

30. $y = \cos^3(x^2 - 3\sqrt{x})$

32. $y = \frac{5}{x}$

34. $y = \frac{x^3 - 3}{x}$

36. $y = \frac{(x-1)^3}{3x}$

38. $y = \frac{\sqrt{3x}}{x}$

40. $y = \frac{x}{\sqrt{3x}}$

42. $y = \ln(3x - 1)$

44. $y = \ln \sqrt{x-2}$

46. $y = e^{x^2}$

48. $y = e^{x^2 - 2x}$

50. $y = \operatorname{tg}(x^3)$

52. $y = \sqrt{e^{\operatorname{cos} x}}$

54. $y = (x^2 - 1) \cdot (x - 1)$

56. $y = e^{x^2} \cdot \cos x$

58. $y = e^{x^4 - 3x^2} \cdot \operatorname{sen} x$

$$59. y = \ln x^2 \cdot e^{\operatorname{sen} x}$$

$$61. y = \left(\frac{x^2 - 3}{x^2 + 1} \right)^3$$

$$63. y = (\cos^2 3x - \operatorname{sen}^3 x) \cdot e^{x^3}$$

$$65. y = \frac{\ln x}{3^x}$$

$$67. y = \ln \left(\frac{\operatorname{sen} x}{e^x} \right)$$

$$69. y = \frac{3x^4 - 2x^2 + 3x - 2}{2x - 1}$$

$$71. y = \operatorname{arctg}(x^2)$$

$$73. y = \ln(\sec x)$$

$$75. y = \operatorname{arcsen} x \cdot e^{\cos x}$$

$$77. y = \ln \left(\frac{\operatorname{tg} x}{e^{\frac{1}{3x^2}}} \right)$$

$$79. y = \ln(\operatorname{arctg}(5x))$$

$$81. y = 5 \operatorname{arctg}^2(\operatorname{sen} x)$$

$$83. y = \frac{\operatorname{arcsen}(3x - 2)}{x^2}$$

$$85. y = x^{\operatorname{sen} x}$$

$$87. y = (\cos x)^{x^2 - x}$$

$$89. y = \ln \left(\frac{x + 2}{x^2} \right)^3$$

$$91. y = 10 \left(\frac{\operatorname{sen} x - e^x}{3x - \cos x} \right)$$

$$93. y = \frac{x^{\cos x}}{(\ln x)^3}$$

$$95. y = \sqrt[3]{\frac{\operatorname{sen}^2(e^x)}{\operatorname{arctg}(\cos x)}}$$

$$97. y = \frac{\sqrt{\cos(e^x) \cdot x}}{\sqrt{e^{\operatorname{tg} x}}}$$

$$99. y = \sqrt{\frac{\operatorname{arctg} e^x \cdot \cos x}{\ln(x^2 - x)}}$$

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

$$62. y = \ln x \cdot e^{x^2 - \operatorname{sen} x}$$

$$64. y = \left(\frac{\ln x^2}{x^3 - 2} \right)^2$$

$$66. y = \frac{e^x + \ln x}{x^2 - \operatorname{sen} x}$$

$$68. y = \sqrt{\frac{\operatorname{sen} x}{x - 1}}$$

$$70. y = (\operatorname{sen}(e^{3x}))^2 \cdot \cos x$$

$$72. y = \operatorname{arcsen} x^3$$

$$74. y = \operatorname{arctg}(\ln x)$$

$$76. y = \operatorname{arctg}(e^{3x})$$

$$78. y = \operatorname{arcsen} \left(\frac{x + 1}{e^x} \right)$$

$$80. y = \operatorname{arctg} \sqrt{x^3}$$

$$82. y = 3^{\operatorname{arctg}(x^2)}$$

$$84. y = \frac{\operatorname{sen} x - \operatorname{tg} x}{\sqrt{4x - 3}}$$

$$86. y = (\operatorname{sen} x)^{x^2}$$

$$88. y = 4^{\operatorname{arctg}(\ln x)}$$

$$90. y = \left(\frac{e^{3x}}{\operatorname{sen} x} \right)^{x^2}$$

$$92. y = \cos \left(\frac{\operatorname{tg} \sqrt{x}}{\operatorname{sen}(\ln x)} \right)$$

$$94. y = \cos^2(4e^x) \cdot \ln \left(\frac{\operatorname{tg} x}{3^{x^2}} \right)$$

$$96. y = \sqrt{\frac{e^{\ln(\cos x)}}{5^{\cos x}}}$$

$$98. y = (\operatorname{tg}(e^x) + x^2)^x$$

$$100. y = \frac{\ln \sqrt{\cos x}}{\operatorname{sen}(e^{\cos x})}$$