

Calcula la derivada de las siguientes funciones

1 $f(x) = 3x^5 - 2x^3 + 3x - 7$ 2 $f(x) = x^3 - x$ 3 $f(x) = 3\operatorname{sen} x - 2x$

4 $f(x) = x^2 - \cos x + 1$ 5 $f(x) = 4 \cdot e^x - e \cdot x^4$ 6 $f(x) = \ln x - \frac{1}{x}$

7 $f(x) = \frac{4x - 2}{x^2 + 2x}$ 8 $f(x) = (x^2 + 2x + 1)^4$ 9 $f(x) = (x^3 - x^2) \cdot \operatorname{sen} x + 2$

10 $f(x) = \frac{1}{1 + \cos x}$ 11 $f(x) = 1 - \operatorname{cotg} x$ 12 $f(x) = x^3 \cdot e^{-x}$

13 $f(x) = \frac{2x^2 - x}{2x + 1}$ 14 $f(x) = \sqrt{1 - x^2}$ 15 $f(x) = \operatorname{sen} x \cdot \operatorname{tg} x$

16 $f(x) = \sqrt{x} + \ln x - 2$ 17 $f(x) = (x - 1)^3 \cdot e^{x-1}$ 18 $f(x) = \operatorname{sen}^7 x - \operatorname{sen} x$

19 $f(x) = \operatorname{sen}^2 x \cdot \cos 2x$ 20 $f(x) = \frac{\ln x}{1 - x^2}$ 21 $f(x) = \frac{5}{3 + 2\cos x}$

22 $f(x) = x^2 + 2^x$ 23 $f(x) = (x^2 + 1) \cdot \ln x + x$ 24 $f(x) = \frac{e^{\sqrt{x}}}{\sqrt{x}}$

25 $f(x) = \operatorname{sen}^3 2x + 2$ 26 $f(x) = \operatorname{sen}^2(x^3 + 2x)$ 27 $f(x) = \operatorname{tg}(2x + 1)$

28 $f(x) = e^{5x} \cdot \cos 5x$ 29 $f(x) = (\ln x)^2 + \ln x + 1$ 30 $f(x) = \frac{1}{(x+1)^3} - (x+1)^3$

31 $f(x) = x + \sqrt[3]{x}$ 32 $f(x) = \ln(x + \sqrt{1 + x^2})$ 33 $f(x) = \operatorname{tg} x^2 - \operatorname{tg} x + 1$

34 $f(x) = \frac{1 - e^x}{1 + e^x}$ 35 $f(x) = \operatorname{sen} x \cdot \ln(\cos x)$ 36 $f(x) = \frac{\operatorname{tg}^2 x}{\cos^2 x}$

37 $f(x) = x^{\cos x}$ 38 $f(x) = x^{\ln x} + (\ln x)^x$ 39 $f(x) = (x^2 + 1)^{x^2 - 1}$

40 $f(x) = \sqrt{\ln(1 + x^2)}$ 41 $f(x) = x^3 \cdot 3^x$ 42 $f(x) = \frac{1}{\sqrt[3]{x^2}} + \frac{1}{\sqrt[3]{x}} + 1$

43 $f(x) = \sec^3 x - 3$ 44 $f(x) = \frac{1}{1 + \operatorname{tg} x}$ 45 $f(x) = \frac{x}{1 + \ln x}$

46 $f(x) = \log_2 x + 2$ 47 $f(x) = (x + \operatorname{sen} x)^2$ 48 $f(x) = \frac{\ln(\operatorname{sen} x)}{\cos x}$

49 $f(x) = \operatorname{sen} 2x + \operatorname{sen}^2 x$ 50 $f(x) = \frac{\ln(x+1)}{x+1}$ 51 $f(x) = \frac{1}{\sqrt[3]{3x+5}}$

52 $f(x) = 7^{\frac{x}{3}}$

53 $f(x) = \sqrt[3]{\sin x}$

54 $f(x) = \sin(\ln x)$

55 $f(x) = \frac{4}{\cos^4 x}$

56 $f(x) = \ln \sqrt{1+x^2}$

57 $f(x) = \frac{x}{\cotg x}$

58 $f(x) = \operatorname{tg}^3\left(\frac{x}{2}\right) + \frac{x}{4}$

59 $f(x) = x^2 \cdot \ln \sqrt{x+1}$

60 $f(x) = e^{\sin x} \cdot \sin x$

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