

Corrección Control Derivadas 3º Eo. - Matemáticas 4º ESO - 12-04-2018

1. $f'(x) = 2(3x + 8\ln x)(3 + \ln x)$

2. $f'(x) = (2x-1)\sqrt{3-x} - \frac{2x-1}{2\sqrt{3-x}}$

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

4. $f'(x) = \frac{15x^2 - 2}{4}$

5. $f'(x) = -(3 + \frac{1}{x})\sin(3x + \ln x)$

6. $f'(x) = \frac{1 + \ln^2 x}{4\sqrt[4]{(1 + \ln^2 x)^3}}$

7. $f'(x) = 2 \cdot 3^{2x-1/2} \cdot \ln 3$

8. $f'(x) = 9x^2$ ya que $f(x) = 3x^3 - 4$

9. $f'(x) = 3e^{3x} - 1 + \frac{1}{2\sqrt{x}}$

10. $f'(x) = \frac{\frac{\sqrt{x}}{\cos^2 x} - \frac{\ln x}{2\sqrt{x}}}{x}$

11. $f'(x) = 1 \cdot \ln x + x \cdot \frac{1}{x} - 1 = \ln x$

12. $f'(x) = \frac{1}{1 + (x+1)^2}$

$$13) f'(x) = 2 \lg(2x+3) \cdot \frac{2}{\ln^2(2x+3)}$$

$$14) \ln y = x \cdot \ln(x + \cos x) \rightarrow y' = \left(\ln(x + \cos x) + x \frac{1 - \sin x}{x + \cos x} \right) (x + \cos x)^x$$

$$15) \ln y = \frac{1}{2} \ln(e^x - 1) - \ln x - \frac{1}{2} \ln \cos x$$

$$y' = \left(\frac{e^x}{2(e^x - 1)} - \frac{1}{x} + \frac{\sin x}{2 \cos x} \right) \sqrt{\frac{e^x - 1}{x^2 \cos x}}$$

$$16) f'(x) = \frac{-\sin x \cdot x - \cos x}{x^2}$$

$$17) f'(x) = \frac{1}{2} \frac{1}{x+3} - \frac{1}{x} + \frac{\sin x}{\cos x}$$

$$18) f'(x) = 12x^3 + \frac{1}{x^2} + \frac{1}{x} - \frac{1}{\cos^2 x}$$

$$19) f'(x) = 2x \cdot 3^{2x+1} + 2x^2 \cdot 3^{2x+1} \ln 3 = (2x + 2x^2 \ln 3) \cdot 3^{2x+1}$$

$$20) f'(x) = (\sqrt{x} - x^2)^2 + 2x(\sqrt{x} - x^2) \left(\frac{1}{2\sqrt{x}} - 2x \right)$$