

## Cálculo de derivadas

|    |                                  |   |    |   |  |
|----|----------------------------------|---|----|---|--|
| 1  | $y = x^2 - 3x + 1$               | $y' = 2x - 3$   | 2  | $y = x^3 - 3x^2 + 4x - 1$                   | $y' = 3x^2 - 6x + 4$   |
| 3  | $y = \sqrt{x^2 - 1}$             | $y' = \frac{x}{\sqrt{x^2 - 1}}$   | 4  | $y = \sqrt[3]{1 - x^3}$                     | $y' = \frac{-x^2}{\sqrt[3]{(1 - x^3)^2}}$  |
| 5  | $y = \ln(x - 1)$                 | $y' = \frac{1}{x - 1}$  | 6  | $y = \ln(x^3 - 3x^2 + 1)$                   | $y' = \frac{3x^2 - 6x}{x^3 - 3x^2 + 1}$  |
| 7  | $y = e^{x^3 - x}$                | $y' = (3x^2 - 1)e^{x^3 - x}$  | 8  | $y = e^{\sqrt{x}}$                          | $y' = \frac{e^{\sqrt{x}}}{2\sqrt{x}}$  |
| 9  | $y = 3^{2x^2 - 3x + 1}$          | $y' = (4x - 3) \cdot 3^{2x^2 - 3x + 1} \cdot \ln 3$                           | 10 | $y = 5^{\ln(x^2 - 1)}$                      | $y' = \frac{2x}{x^2 - 1} \cdot 5^{\ln(x^2 - 1)} \cdot \ln 5$   |
| 11 | $y = \text{sen}(x^2 - 3x + 1)$   | $y' = (2x - 3) \cdot \cos(x^2 - 3x + 1)$                                      | 12 | $y = \cos e^{2x}$                           | $y' = -2 \cdot e^{2x} \cdot \text{sen} e^{2x}$   |
| 13 | $y = \tan \sqrt{x^2 - 1}$        | $y' = \frac{1}{\cos^2 \sqrt{x^2 - 1}} \cdot \frac{x}{\sqrt{x^2 - 1}}$         | 14 | $y = \cotan[\ln(3^x)]$                      | $y' = \frac{-1}{\text{sen}^2 \ln(3^x)} \cdot \ln 3$  |
| 15 | $y = x \cdot \text{sen} x$       | $y' = \text{sen} x + x \cdot \cos x$  | 16 | $y = x^2 \cdot e^x$                         | $y' = 2x \cdot e^x + x^2 \cdot e^x = (2x + x^2) \cdot e^x$   |
| 17 | $y = \sqrt{x} \cdot \ln x$       | $y' = \frac{1}{2\sqrt{x}} \cdot \ln x + \frac{\sqrt{x}}{x}$                   | 18 | $y = \frac{x^2 - 1}{x^2 + 1}$               | $y' = \frac{4x}{(x^2 + 1)^2}$  |
| 19 | $y = \frac{x^2 - x}{x^2 + x}$    | $y' = \frac{2x^2}{(x^2 + x)^2}$   | 20 | $y = \frac{x + \text{sen} x}{\text{sen} x}$ | $y' = \frac{\text{sen} x - x \cdot \cos x}{(\text{sen} x)^2}$  |
| 21 | $y = \text{sen}^2 x^2$           | $y' = 4 \cdot \text{sen} x^2 \cdot x \cdot \cos x^2$                          | 22 | $y = (x^2 - 3x + 1)^6$                      | $y' = 6 \cdot (x^2 - 3x + 1)^5 \cdot (2x - 3)$   |
| 23 | $y = \ln \sqrt{\frac{x+1}{x-1}}$ | $y' = \frac{-1}{x^2 - 1}$   | 24 | $y = \ln \sqrt[5]{\frac{x^2 + 1}{x^2 - 1}}$ | $y' = \frac{1}{5} \frac{-4x}{x^4 - 1}$   |
| 25 | $y = \arctan(x^2 - 1)$           | $y' = \frac{2x}{1 + (x^2 - 1)^2}$   | 26 | $y = x \cdot \text{sen} x \cdot \cos x$     | $y' = \text{sen} x \cdot \cos x + x \cdot \cos^2 x - x \cdot \text{sen}^2 x$   |
| 27 | $y = (x \cdot \text{sen} x)^3$   | $y' = 3 \cdot (x \cdot \text{sen} x)^2 \cdot (\text{sen} x + x \cdot \cos x)$ | 28 | $y = 4^x \cdot e^x$                         | $y' = (e^x + x \cdot e^x) \cdot 4^x \cdot \ln 4$   |
| 29 | $y = \ln(\text{sen}(\ln x))$     | $y' = \frac{1}{x \cdot \tan(\ln x)}$  | 30 | $y = \frac{x^2}{\text{sen} x \cos x}$       | $y' = \frac{2 \cdot x \cdot \text{sen} x \cdot \cos x - x^2 \cdot (\cos^2 x - \text{sen}^2 x)}{(\text{sen} x \cdot \cos x)^2}$ |