Derivadas

1: $F(x) = 3x^2 - x + 5$

$F'(x) = 2 \cdot 3^{2-1} - 1$

$F'(x) = 6x - 1$

2- $G(T) = T - 3T^2 - 2T^4$

$g'(T) = T - 3T^2 - 2T^4$

$g'(T) = 1 - 2 \cdot 3T - 4 \cdot 2T^3$

$g(T) = 1 - 6t + 8T^3$

4- $g'(x) = (2x^1 - 1)(x^3 + 2)$

$g(x) = (2x^1 - 1)(x^3 + 2)$

$g'(x) = (4x)(x^5 + 2) + (2x^2 - 1)(3x^2)$

5- $h(x) = (x+1)^2$

$h'(x) = 2(x+1)(1)$

$h'(x) = 2(x+1)$

6- $G(T) = (4T - 7)$

$g'(x) = 2(4T - 7) \cdot (4)$

$g'(x) = (8T - 14) \cdot (4)$

$g'(x) = 32T - 56$

7- $F(7) = 7(2y - 1)(2y + 1)$

$F'(7) = (4y - 1)(2y^2 + 7)(2y^2 - 7)(4y + 1)$

8- $F(x) = 4x^4 - \frac{1}{x^2}$

$F'(x) = 16x^3 - \left[\frac{0 \cdot x^2 - 1 \cdot 2x}{(x^2)^2}\right]$

$F'(x) = 16x^3 - \frac{-2x}{x^4}$

$= 16x^3 + \frac{2}{x^4}$

9- $g(x) = \frac{1}{x-1} - \frac{1}{x-1}$ $g'(x) = 0$

10- $F(T) = \frac{1}{4-T^2}$ $F'(T) = [0)(4-T^2) - (1)(0-2T)$

11- $h(x) = \frac{3}{x^2+x+1}$ $h'(x) = \frac{3(2x+1)}{(x^2+x+1)^2}$

12- $F(x) = \frac{1}{1-\frac{2}{x}}$ $F'(x) = (0)(1-\frac{2}{x}) - (1)(0\cdot 2(x)(2x1)$

13- $g(T) = (T^2+1)(T^3+T^2+1)$ $g'(T) = (2T)(T^3+T^2+1)\cdot(T^2+1)(3T+2T)$

14- $F(x) = (2x^3-3)(17x^4-6x+2)$

$F'(x) = (6x^2-0)(17x^4-6x+2) - (2x^3-3)(68x^3-(x+0)$

15- $g(z) = \frac{1}{2z} - \frac{1}{3z^2}$ $g'(z) = \frac{1}{2z^2} + \frac{2}{3z^3}$

16- $F(x) = 2x^3 - 3x^2 + 4x - 5$ $\frac{F'(x) = (6x^2-(x)\cdot(4x+5) - (2x^2-3x^2) + (4x-0)}{(x^2)^2}$

17- $g(y) = 2y(3y^2-1)(y^2+2y+3)$

$g'(y) = 2y(6y-0)(y^2+2y+3) - (2y)(3y^2-1)(2y+2+0)$

18- $F(x) = \frac{x^2-4}{x^2+4}$ $\frac{16x}{(x^2+4)^2}$

19- $g(T) = \frac{T-1}{T^2+2T+1}$ $\frac{g'(T) = (1-0)(T^2+2T+1) - (T+1)(2T+2+0)}{(T^2+2+1)^2}$

$g'(T) = \frac{(T^2+2+1)(1-1)(2+1^2)}{T^2+2T+1)^2}$

20- $U(x) = \frac{1}{(x+2)^2}$ $\frac{U'(x) = 0(x+2)^2 - 1[2(x+2)(1)]}{[(x+2)^2]^2}$

21- $U(T) = \frac{1}{(1+\frac{1}{T})^2}$ $\quad U'(T) = \frac{(1)(T-1)^3 \cdot (1)(3(T-1)^2}{(T-1)^2}$

22- $h(x) = \frac{2x^3+x^2-3x+17}{2x-5}$ $\quad h'(x) = \frac{(6x^2+2x)\cdot(3x+17)-(2x^3+x^2)-(3x+0)}{(2x-5)^2}$

23- $g(x) = \frac{3x}{x^3+7x-5}$ $\quad g'(x) = \frac{(3x)(x^3+7x-5)-(3x)(3x^2+7x-0)}{(x^3+7x-5)^2}$

24- $F(T) = \frac{1}{(1+\frac{1}{T})^2}$ $\quad F'(T) = \frac{2T}{(T+1)^2}$

25- $g(x) \quad \frac{\frac{1}{x}-\frac{2}{x^2}}{\frac{2}{x^3}-\frac{3}{x^4}}$ $\quad g'(x) = \frac{\frac{1}{-x^2}\ \frac{-4x}{x^3}\left[\frac{2}{x^3}-\frac{3}{x^4}\right]-\left[\frac{1}{x}-\frac{2}{x^2}\right]\left[\frac{6x^2}{x^6}-\frac{12x^3}{x^8}\right]}{\left[\frac{2}{x^3}-\frac{3}{x^4}\right]^2}$

$(T-x)$