

$$y = \frac{2}{x-1} \Rightarrow y' = \frac{(0) \cdot (x-1) - (1) \cdot (2)}{(x-1)^2}$$

$$= \frac{0-2}{x^2+1-2x} = \frac{-2}{(x-1)^2}$$

$$y = \frac{x^2}{2-x^3} \Rightarrow y' = \frac{(2x)(2-x^3) - (-3x^2)(x^2)}{(2-x^3)^2} =$$

$$= \frac{4x-2x^4+3x^4}{(2-x^3)^2} = \frac{x^4+4x}{(2-x^3)^2}$$

$$182) \quad y = \frac{2}{(x+3)^2} \Rightarrow y' = \frac{(0)(x+3)^2 - (2x+6) \cdot 2}{(x+3)^4} = \frac{-2(x+3) \cdot 2}{(x+3)^4}$$

$$= \frac{-4(x+3)}{(x+3)^4} = \frac{-4}{(x+3)^3}$$

$$y = \frac{x^2-3x+5}{x^2-1} \Rightarrow y' = \frac{(2x-3)(x^2-1) - (2x)(x^2-3x+5)}{(x^2-1)^2} =$$

$$= \frac{2x^3-3x^2-2x+3-2x^3+6x^2-10x}{(x^2-1)^2} = \frac{+3x^2-12x+3}{(x^2-1)^2}$$

$$= \frac{3(x^2-4x+1)}{(x^2-1)^2}$$

$$y = 2 + \frac{x}{6+2x} - \frac{x^2-1}{x+3}$$

$$= \frac{4(x+3)+x-2(x^2-1)}{2(x+3)} = \frac{9x+12+x-2x^2+2}{2(x+3)} =$$

$$= \frac{-2x^2+5x+14}{2(x+3)} \Rightarrow y' = \frac{(-4x+5)(2x+6) - (2x-2x^2+5x+14)}{4(x+3)^2} =$$

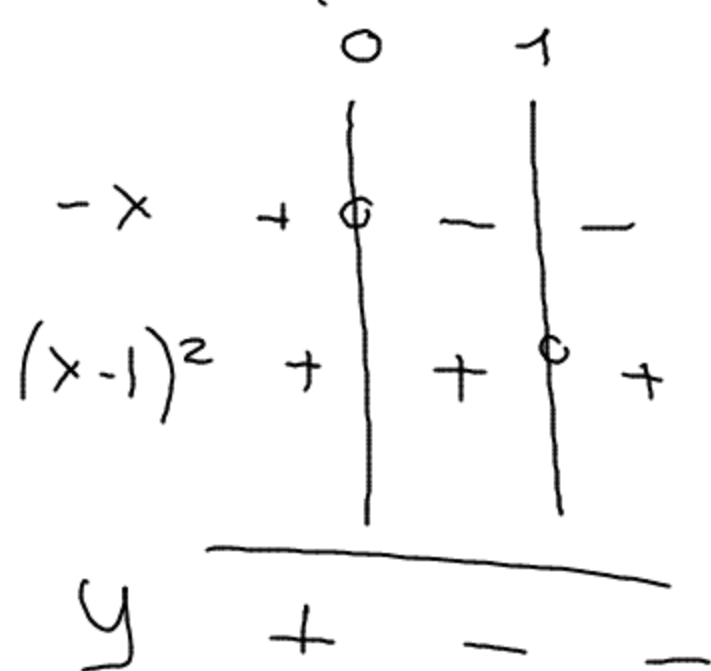
$$= \frac{-8x^2-29x+15x+30+9x^2-15x-28}{4(x+3)^2} = \frac{-9x^2-29x+2}{4(x+3)^2} =$$

$$= \frac{-2(2x^2+12x-1)}{4(x+3)^2} = \frac{-(2x^2+12x-1)}{2(x+3)^2}$$

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

$$y = -x(x^2 - 2x + 1)$$

$$y = -x(x-1)^2$$



$$f\left(+\frac{1}{3}\right) =$$

$$f(+1) =$$

TANGENTE =

$$y = mx + q$$

$$D =] -\infty ; +\infty [$$

$$D = \{ \forall x \in \mathbb{R} \}$$

INT ASSE x $(0;0)$ $(1;0)$

INT ASSE y $\begin{cases} x=0 \\ y=0 \end{cases} (0;0)$

$$-x = 0$$

$x = 1$ doppia

$$-3x^2 + 3x + x - 1$$

$$-3x(x-1) + 1(x-1)$$

$$y' = -3x^2 + 4x - 1$$

$$y' = (-3x + 1)(x - 1)$$

$$x = +\frac{1}{3}$$

$$x = +1$$

