

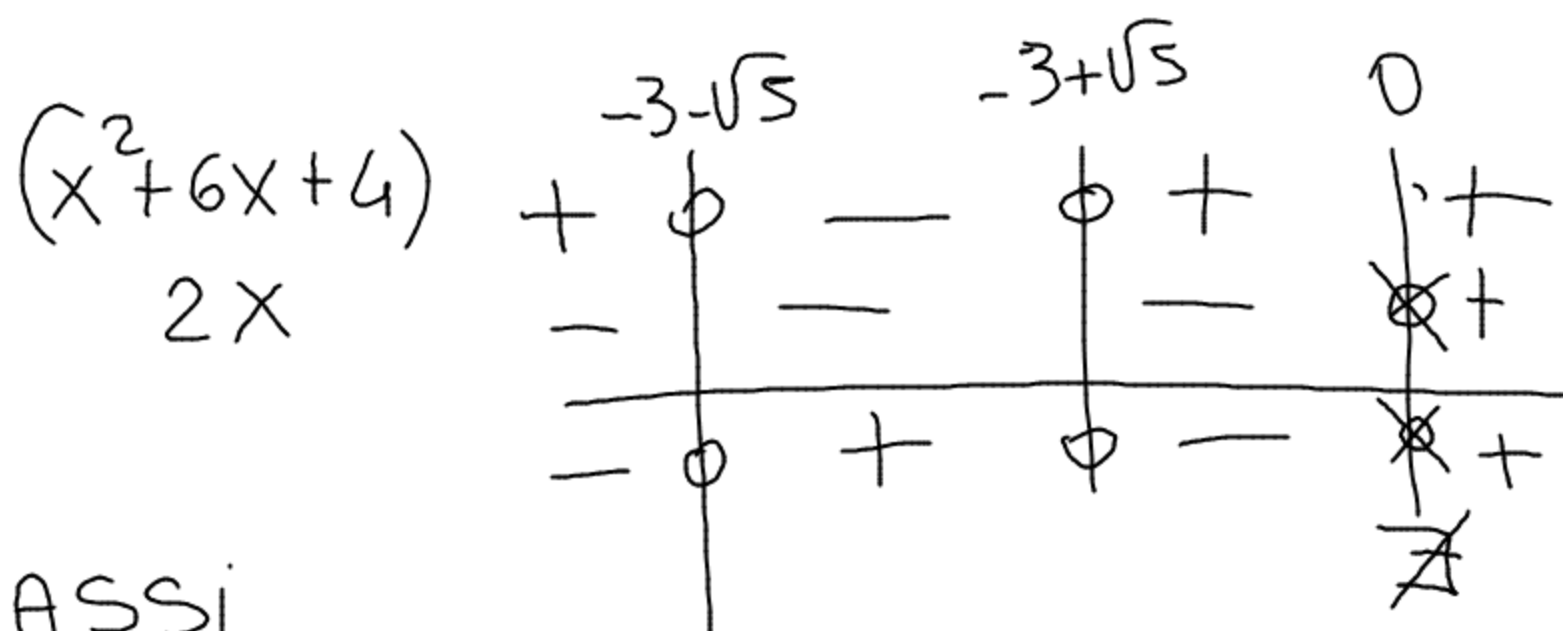
$$y = \frac{x^2 + 6x + 4}{2x}$$

$$D =]-\infty; 0[\cup]0; +\infty[$$

$$D = \{ \forall x \in \mathbb{R} : x \neq 0 \}$$

$$\Delta = 20$$

$$x_{1,2} \begin{cases} \frac{-6 - \sqrt{20}}{2} = \frac{-6 - 2\sqrt{5}}{2} = \frac{2(-3 - \sqrt{5})}{2} = -3 - \sqrt{5} \approx -5,24 \\ \frac{-6 + \sqrt{20}}{2} = -3 + \sqrt{5} \approx -0,76 \end{cases}$$



INT ASSI

$$(-5,24; 0) \quad (-0,76; 0)$$

AS. VERTICALE

$$x = 0$$

AS. OBLIQUO

$$m = \lim_{x \rightarrow \infty} \frac{f(x)}{x}$$

$$= \lim_{x \rightarrow \infty} \frac{\frac{x^2}{x^2} + \frac{6x}{x^2} + \frac{4}{x^2}}{\frac{2x^2}{x^2}} = \frac{1}{2}$$

$$q = \lim_{x \rightarrow \infty} \left(\frac{x^2 + 6x + 4}{2x} - \frac{1}{2}x \right)$$

$$= \lim_{x \rightarrow \infty} \frac{x^2 + 6x + 4 - x^2}{2x}$$

$$= \lim_{x \rightarrow \infty} \frac{6x + 4}{2x} = \lim_{x \rightarrow \infty} \frac{\frac{6x}{x} + \frac{4}{x}}{\frac{2x}{x}} = \frac{6}{2} = 3$$

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

$$y = \frac{x^2 + 6x + 4}{2x}$$

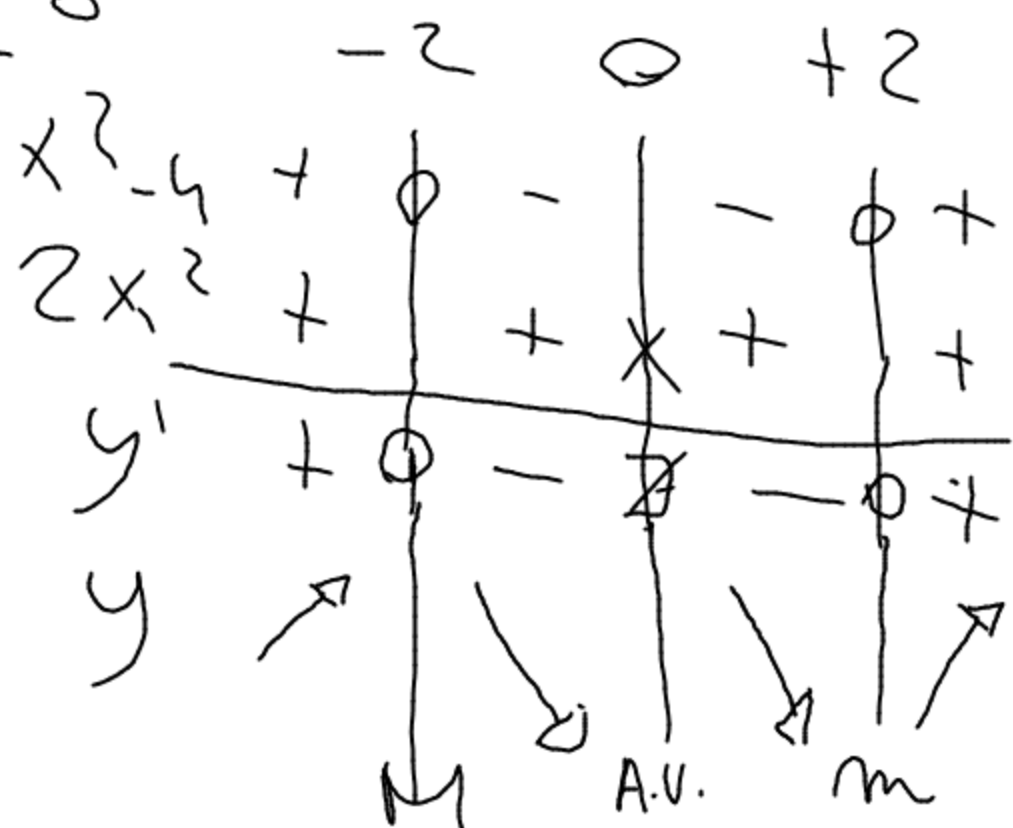
$$y' = \frac{(2x+6)(2x) - (2)(x^2+6x+4)}{4x^2}$$

$$y' = \frac{4x^2 + 12x - 2x^2 - 12x - 8}{4x^2}$$

$$y' = \frac{2x^2 - 8}{4x^2}$$

$$y' = \frac{x(x^2 - 4)}{2x^2}$$

$$y' = \frac{x^2 - 4}{2x^2}$$



$$y_M = f(-2) = \frac{(-2)^2 + 6(-2) + 4}{2(-2)} = \frac{4 - 12 + 4}{-4} = \frac{-4}{-4} = +1$$

$$y_m = f(2) = \frac{(2)^2 + 6(2) + 4}{2(2)} = \frac{4 + 12 + 4}{4} = \frac{20}{4} = 5$$

Max(-2, 1)
min(2, 5)

