N° 297 PAG. 166

b; c

$m_t\left(-2; -\frac{1}{9}\right)$

$$f(x) = \frac{x^2+bx+c}{x^2-5x+4}$$

$$f'(x) = \frac{(2x+b)(x^2-5x+4) - (x^2+bx+c)(2x-5)}{(x^2-5x+4)^2}$$

$$\begin{cases} -\frac{1}{9} = \frac{4-2b+c}{4+10+4} \\ f'(x)\big|_{x=-2} = 0 \end{cases}$$

$$\begin{cases} \frac{6-2b+c}{18} = 0 \\ D\left(\frac{x^2+bx+c}{x^2+4-5x}\right)\Big|_{x=-2} = 0 \end{cases}$$

$$\begin{cases} \frac{6-2b+c}{18} = 0 \\ \frac{(-4+b)(18)+(4-2b+c)\cdot(+9)}{18^2} = 0 \end{cases}$$

$$\begin{cases} c = 2b-6 \\ -72+18b+36-18b+18b-54 = 0 \end{cases}$$

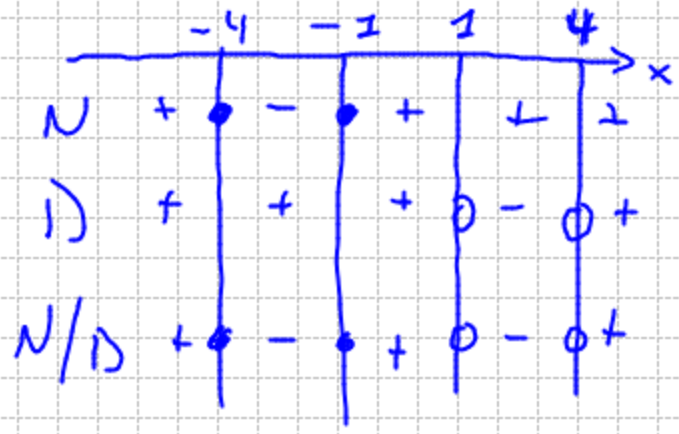
$$\begin{cases} b = \frac{90}{18} = 5 \\ c = 4 \end{cases} \qquad \begin{cases} b = 5 \\ c = 4 \end{cases}$$

$$y = \frac{x^2+5x+4}{x^2-5x+4}$$

$$\frac{x^2+5x+4}{x^2-5x+4} \geq 0$$

$N \geq 0 \Rightarrow x_{1/2} = \frac{-5 \pm \sqrt{25-16}}{2} = \frac{-5 \pm 3}{2} \begin{cases} x_1 = -4 \\ x_2 = -1 \end{cases}$ + (−) + on −4, −1 → Si: $(-\infty; -4] \cup [-1; +\infty)$

$D > 0 \Rightarrow x_{1/2} = \frac{5 \pm \sqrt{25-16}}{2} = \begin{cases} x_1 = 4 \\ x_2 = 1 \end{cases}$ + (−) + on 1, 4 → Si: $(-\infty; 1) \cup (4; +\infty)$



$f(x) \geq 0$ per $x \leq -4 \cup -1 \leq x < 1 \cup x > 4$

finire

$f'(x) \geq 0$