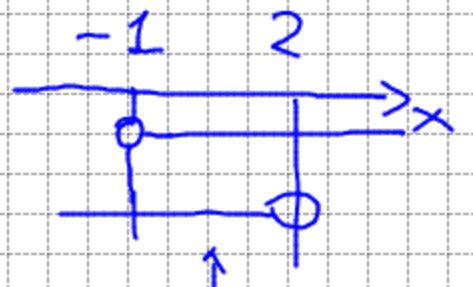


$$\log_{\frac{1}{3}}(x+1) - 2 \log_{\frac{1}{3}}(2-x) \leq 1$$

$$C.E \left\{ x \in \mathbb{R} \mid \begin{cases} x+1 > 0 \\ 2-x > 0 \end{cases} \Rightarrow \begin{cases} x > -1 \\ x < 2 \end{cases}$$


C.E (-1; 2)

$$\begin{cases} \log_{\frac{1}{3}}(x+1) - 2 \log_{\frac{1}{3}}(2-x) \leq 1 \\ -1 < x < 2 \end{cases}$$

$$\begin{cases} \log_{\frac{1}{3}} \frac{(x+1)}{(2-x)^2} \leq 1 \\ -1 < x < 2 \end{cases} \Rightarrow \begin{cases} \frac{x+1}{(2-x)^2} \geq \frac{1}{3} \\ -1 < x < 2 \end{cases}$$

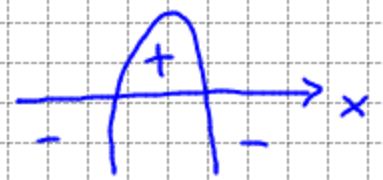
$$\begin{cases} \frac{3x+3-4-x^2+4x}{3(2-x)^2} \geq 0 \\ -1 < x < 2 \end{cases}$$

$$\begin{cases} \frac{-x^2+7x-1}{3(2-x)^2} \geq 0 \\ -1 < x < 2 \end{cases}$$

N  $-x^2 + 7x - 1 \geq 0$       $-x^2 + 7x - 1 = 0$

$$x_{1,2} = \frac{-7 \pm \sqrt{49-4}}{-2} = \frac{-7 \pm \sqrt{45}}{-2}$$

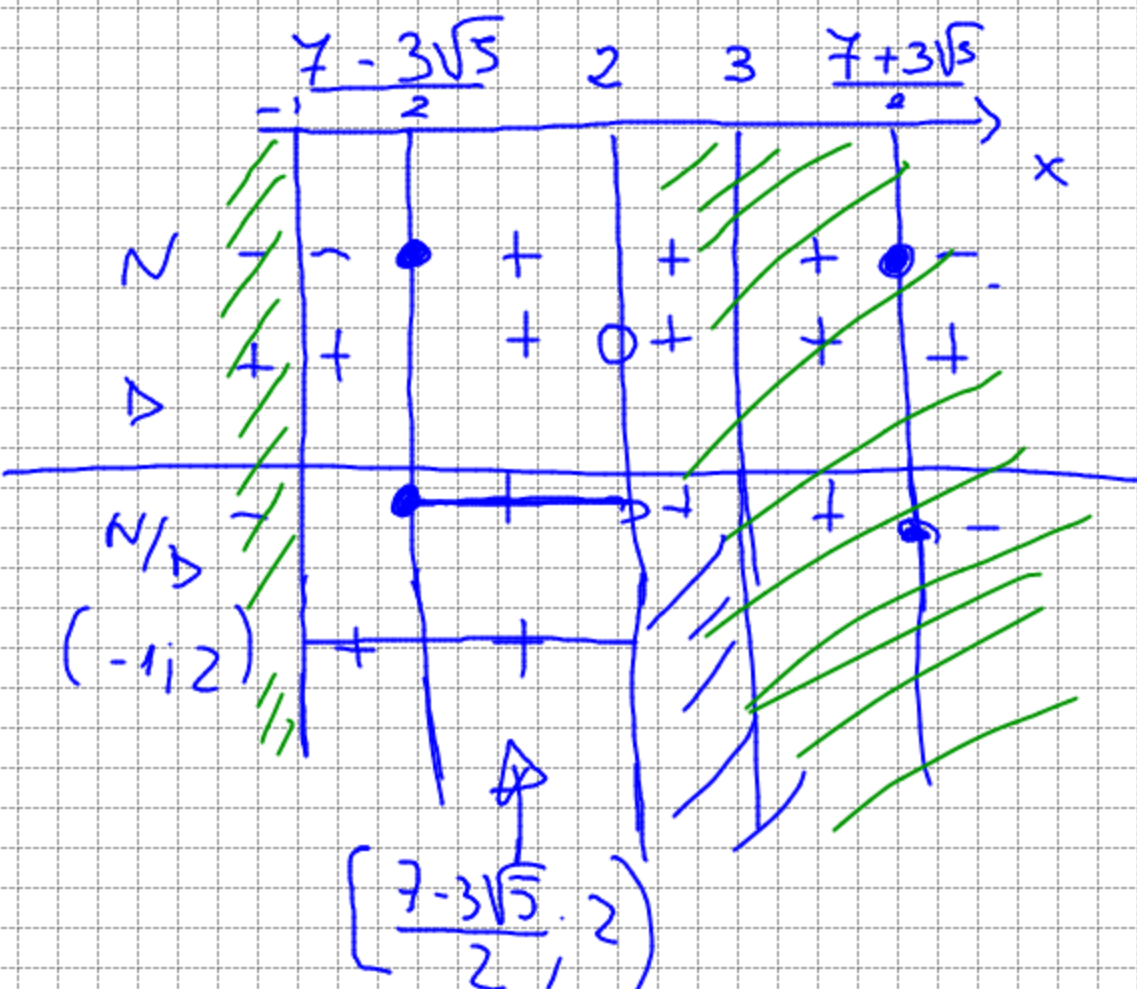
$$x_{1,2} = \begin{cases} \frac{7+3\sqrt{5}}{2} \\ \frac{7-3\sqrt{5}}{2} \end{cases}$$



▷  $3(2-x)^2 > 0$

3 > 0 sempre

$(2-x)^2 > 0$  sempre + escluso  $x=2$



$$\log_a b^c = c \log_a b$$

2/2

$$\log_a b = x$$

$$a^x = b$$

$$a^{xc} = b^c$$

$$xc = \log_a b^c$$

$$c \log_a b = \log_a b^c$$

$$y = \log_a x$$

