9/12/2020

**236** $\dfrac{2x-8}{4-3x} > 0$ (N) (D)

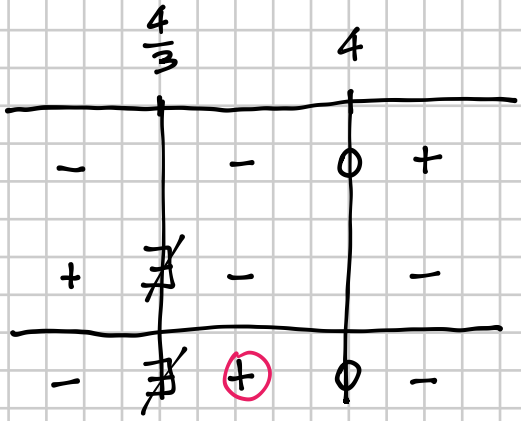
POSITIVO → $>0$

NEGATIVO → $<0$

$N>0 \quad 2x-8>0 \quad 2x>8 \quad x>4$

$D>0 \quad 4-3x>0 \quad -3x>-4 \quad x<\frac{4}{3}$

$3x<4$




$\frac{4}{3} < x < 4$

OSSERVAZIONE

Se avessi $\dfrac{2x-8}{4-3x} < 0$ la soluzione sarebbe $x<\frac{4}{3} \vee x>4$

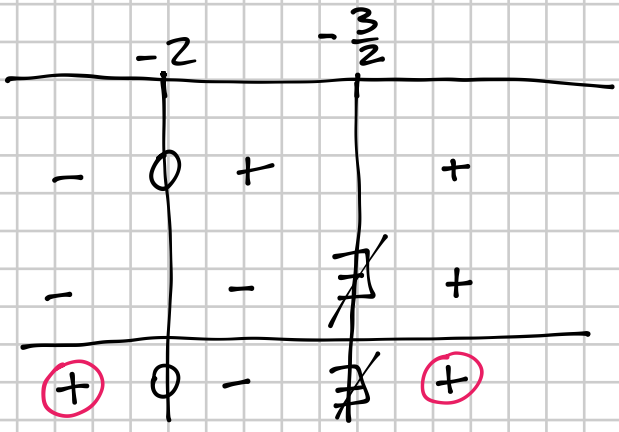
**237** $\dfrac{1}{2x+3} > -1$

$\dfrac{1}{2x+3}+1>0 \qquad \dfrac{1+2x+3}{2x+3}>0$

(N) $\dfrac{2x+4}{2x+3}>0$ (D)

$N>0 \quad 2x+4>0 \quad 2x>-4 \quad x>-2$

$D>0 \quad 2x+3>0 \quad 2x>-3 \quad x>-\frac{3}{2}$




$x<-2 \vee x>-\frac{3}{2}$

**241** $-\dfrac{1}{3-x} > \dfrac{x}{6-2x}$ $[x < -2 \vee x > 3]$

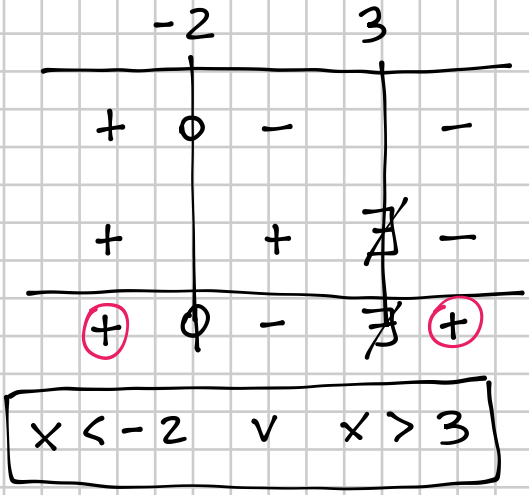
$$-\frac{1}{3-x} - \frac{x}{2(3-x)} > 0$$

$$\frac{-2-x}{2(3-x)} > 0$$

$$\frac{-2-x}{3-x} > 0$$

$N > 0 \quad -2-x > 0 \quad -x > 2 \quad x < -2$

$D > 0 \quad 3-x > 0 \quad -x > -3 \quad x < 3$




$x < -2 \quad \vee \quad x > 3$

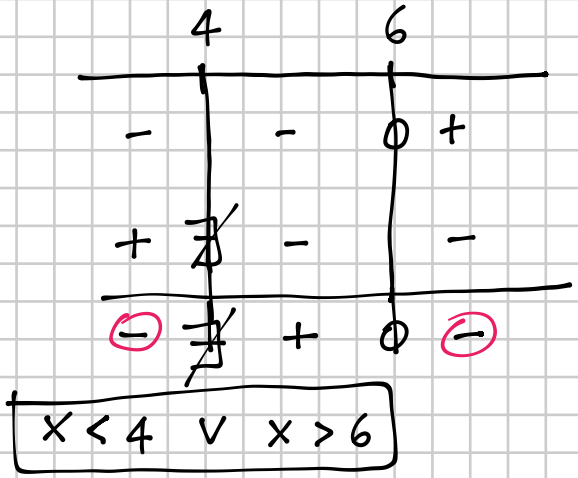
**248** $\dfrac{10}{4-x} > -5$

$$\frac{10}{4-x} + 5 > 0 \qquad \frac{10+20-5x}{4-x} > 0 \qquad \frac{30-5x}{4-x} > 0$$

$$\frac{-5(x-6)}{4-x} > 0 \Rightarrow \text{moltiplico per } -\frac{1}{5} \quad \frac{x-6}{4-x} < 0$$

$N > 0 \quad x-6 > 0 \quad x > 6$

$D > 0 \quad 4-x > 0 \quad -x > -4 \quad x < 4$




$x < 4 \quad \vee \quad x > 6$

**255** $\dfrac{(5x-2)^2-(5x-2)(5x+2)}{2x-6} \geq \dfrac{1}{3-x}$

$$\frac{25x^2+4-20x-(25x^2-4)}{2(x-3)} + \frac{1}{\frac{3-x}{x-3}} \geq 0$$

$$\frac{25x^2+4-20x-25x^2+4+2}{2(x-3)} \geq 0$$

$$\frac{10-20x}{2(x-3)} \geq 0$$

negativo $\Rightarrow$ semplifico e cambio verso della disuguaglianza

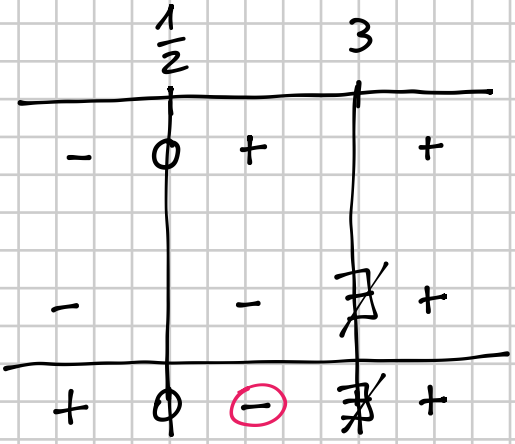
$$\frac{-10(2x-1)}{2(x-3)} \geq 0$$

N] $\dfrac{2x-1}{x-3} \leq 0$

D]

$N>0 \quad 2x-1>0 \quad 2x>1 \quad x>\frac{1}{2}$

$D>0 \quad x-3>0 \quad x>3$




$$\frac{1}{2} \leq x < 3$$

**260** $\dfrac{4x - 2x^2}{x + 3} \leq 0$

negativo

$$\frac{-2x(x-2)}{x+3} \leq 0$$

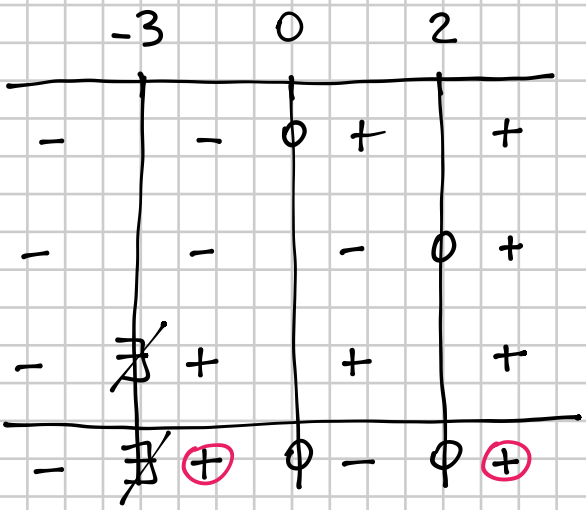
$N_1 \quad N_2$

$$\frac{x(x-2)}{D \quad x+3} \geq 0$$

$N_1 > 0 \quad x > 0$

$N_2 > 0 \quad x - 2 > 0 \quad x > 2$

$D > 0 \quad x + 3 > 0 \quad x > -3$




$-3 < x \leq 0 \quad \vee \quad x \geq 2$