



$$\frac{4}{x} + \frac{4x}{x-3} + \frac{13-4x^2}{x^2-3x} = 0$$

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

$$\frac{4}{x} + \frac{4x}{x-3} + \frac{13-4x^2}{x(x-3)} = \frac{0}{1}$$

$$\frac{4(x-3) + 4x \cdot x + 13 - 4x^2}{x(x-3)} = \frac{0}{x(x-3)}$$

C.E

$$x \neq 0$$

$$x-3 \neq 0$$

$$x \neq 3$$

$$4x - 12 + 4x^2 + 13 - 4x^2 = 0$$

$$4x = -1 \Rightarrow x = -\frac{1}{4}$$

ACCETTABILE

$$\frac{x+2}{2} - \frac{1}{4} + \frac{3x-2}{6} + \frac{1}{4}(1-2x) - \frac{4x+1}{6} < \frac{2-4x}{3} + \frac{2-3x}{1}$$

$$\frac{6(x+2) - 3 + 2(3x-2) + 3(1-2x) - 4(4x+1)}{12} < \frac{4(2-4x) + 24 - 36x}{12}$$

$$6x + 12 - 3 + 6x - 4 + 3 - 6x - 48x + 2 < 8 - 16x + 24 - 36x$$

$$-42x + 10 < -42x + 32$$

$$\frac{10}{10}x < \frac{22}{10} \implies x < \frac{11}{5}$$

Disequazioni fratte di 1° grado

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

Studio del segno

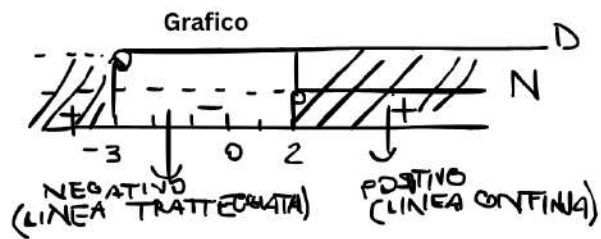
Si pone sempre tutto maggiore di 0

$$N \quad x-2 > 0 \Rightarrow \boxed{x > 2}$$

$$D \quad x+3 > 0 \Rightarrow \boxed{x > -3}$$

PALLINO PIENO •  
DIS. LARCA

PALLINO VUOTO ◯  
DIS. STRETTA



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

Ho preso le regioni dove la frazione è positiva, perchè sono solo quelle che mi interessano, in quanto la frazione deve essere strettamente maggiore di 0

$$\frac{x-2}{x-16} \leq 0$$



$$2 < x < 16$$

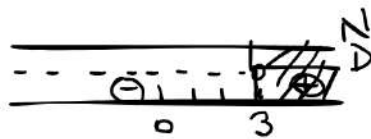
$$\begin{aligned} \text{N} \quad & x-2 > 0 \\ & x > 2 \\ \text{D} \quad & x-16 > 0 \\ & x > 16 \end{aligned}$$

$$\frac{2x-1}{x-3} > 2$$

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

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

$$\frac{\cancel{2x}-1-\cancel{2x}+6}{x-3} > 0 \quad \frac{5}{x-3} > 0$$



$$\boxed{x > 3}$$

$$\begin{array}{l} \mathbb{Z} \quad 5 > 0 \\ \forall x \in \mathbb{R} \\ \mathbb{D} \quad x-3 > 0 \\ \quad x > 3 \end{array}$$