

LEZIONE

$$\frac{x-2}{x+5} > \frac{3}{x-2} + 1$$

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

$$\frac{(x-2)(x-2) - 3(x+5) - (x-2)(x+5)}{(x-2)(x+5)} > 0$$

$$(x-2) \cdot (x-2) = (x-2)^2$$

$$\frac{x^2 - 4x + 4 - 3x - 15 - (x^2 + 5x - 2x - 10)}{(x-2)(x+5)} > 0$$

$$\frac{-4x + 4 - 3x - 15 - x^2 - 3x + 10}{(x-2)(x+5)} > 0$$

$$\frac{-10x - 1}{(x-2)(x+5)} > 0$$

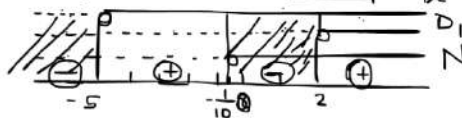
$$\frac{10x+1}{(x-2)(x+5)} < 0$$

$$N \quad 10x+1 > 0 \Rightarrow \frac{10x}{10} > -\frac{1}{10}$$

$$x > -\frac{1}{10}$$

$$D_1 \quad x-2 > 0 \Rightarrow x > 2$$

$$D_2 \quad x+5 > 0 \Rightarrow x > -5$$



$$x < -5 \vee -\frac{1}{10} < x < 2$$

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

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

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

$$\frac{3x^2 - 4x + 1 - 3(x^2 - 3x + 2x - 6)}{(x+2)(x-3)} < 0$$

$$\frac{\cancel{3x^2} - 4x + 1 - \cancel{3x^2} + 9x - 6x + 18}{(x+2)(x-3)} < 0$$

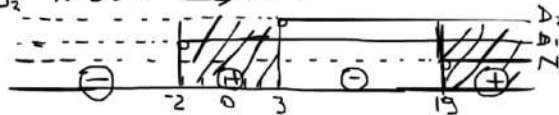
$$\frac{-x + 19}{(x+2)(x-3)} < 0 \quad \boxed{\frac{x-19}{(x+2)(x-3)} > 0}$$

$$\text{N } x - 19 > 0$$

$$\boxed{x > 19}$$

$$D_1 \quad x + 2 > 0 \implies x > -2$$

$$D_2 \quad x - 3 > 0 \implies x > 3$$



$$\boxed{-2 < x < 3 \vee x > 19}$$