$$x^2 > \frac{1}{2}(x+1)$$

$$x^2 > \frac{1}{2}x + \frac{1}{2}$$

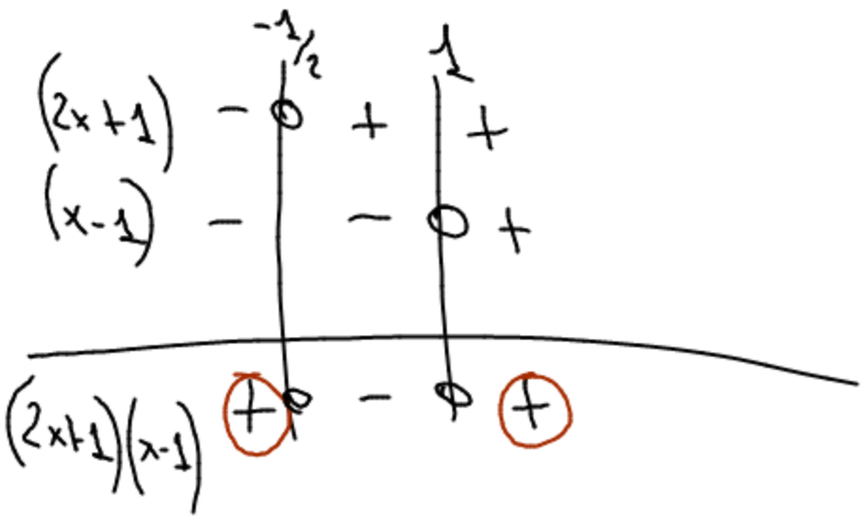
$$x^2 - \frac{1}{2}x - \frac{1}{2} > 0$$

$$2x^2 - x - 1 > 0 \longrightarrow \text{altro procedimento}$$

$$2x^2 - 2x + x - 1 > 0$$

$$2x(x-1) + 1(x-1) > 0$$

$$(2x+1)(x-1) > 0$$

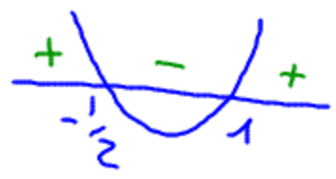


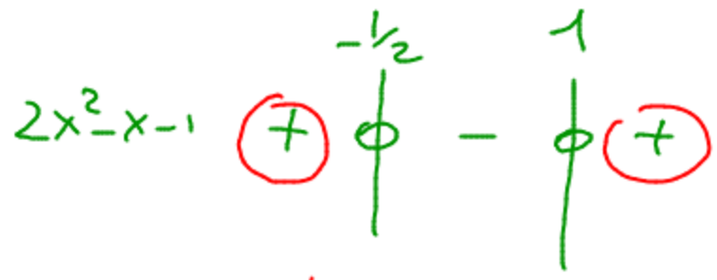
$x < -\frac{1}{2} \vee x > 1$

$$\left]-\infty; -\frac{1}{2}\right[\cup \left]1; +\infty\right[$$

$$\Delta = b^2 - 4ac = 1 + 8 = 9$$

$$x_{1,2} = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{1 \pm 3}{4} = \begin{cases} -\frac{1}{2} \\ 1 \end{cases}$$





$x < -\frac{1}{2} \vee x > 1$

$$9x^2 + 25 < 0$$

$$\frac{9}{9}x^2 = \frac{-25}{9}$$

$$\sqrt{x^2} = \sqrt{-\frac{25}{9}}$$

$x = \pm\sqrt{-\frac{25}{9}} \notin \mathbb{R}$

l'equazione non ha soluzioni

$\cup$

$9x^2 + 25 \longrightarrow$

$9x^2 + 25$ +

Il predicato è < 0

ma $9x^2 + 25$ è sempre positivo

quindi la soluzione della disequazione

$x^2 + 25$ $S = \emptyset$

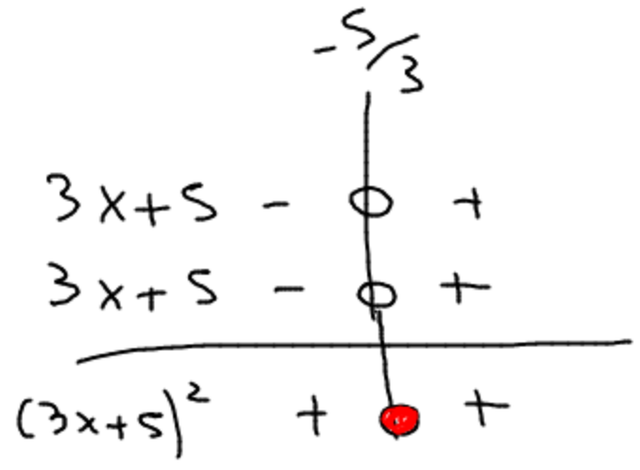
$9x^2 + 25 \geq 0$ $\cup$

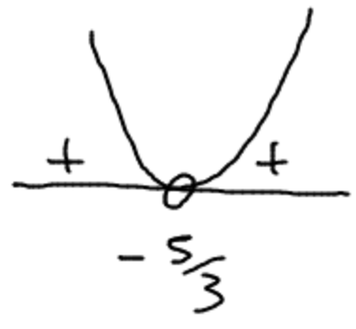
$9x^2 + 25 \longrightarrow$ (+)

$S = \forall x \in \mathbb{R}$ $\quad]-\infty; +\infty[$

$$9x^2+25+30x \leq 0$$

$$(3x+5)^2 \leq 0$$





$x = -5/3$

$S = \{-\frac{5}{3}\}$

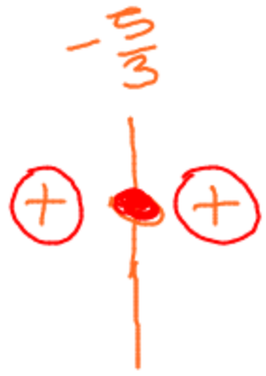
$9x^2+30x+25 < 0$ $\quad S = \emptyset \quad \nexists x \in \mathbb{R}$

$9x^2+30x+25 > 0$

$x < -5/3 \vee x > -5/3$

$]-\infty; -5/3[\cup]-5/3; +\infty[$

$9x^2+30x+25 \geq 0$



$\forall x \in \mathbb{R}$ $\quad S = \mathbb{R}$

$]-\infty; \infty[$