

# EQUAZIONI E DISEQUAZIONI DI 1° E 2° GRADO

①  $\frac{2}{5} + \frac{1}{3}(x+1) \geq 2x - \frac{1}{5}(2x-1)$

②  $\frac{(x+1)^2}{4} - \frac{(2x+1)^3}{12} < \frac{x(1-2x^2)}{3} - \left(\frac{3}{4}x^2 + \frac{1}{3}x + 1\right)$

③  $x^2 - 6x + 5 = 0$        $x^2 - 6x + 5 > 0$

	SOLUZIONI
> 0	
< 0	
≤ 0	

④  $4x^2 - 1 \geq 0$        $5x - 3x^2 \leq 0$

⑤  $4 - 3x - x^2 > 0$        $-12x + 9 > -4x^2$

	SOLUZIONI
> 0	
> 0	
< 0	
≤ 0	

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

⑦  $\frac{x^2}{x^2-1} \leq 0$        $\frac{4x^2}{5-x} > 0 \rightarrow x > \dots \wedge x \neq \dots$

⑧  $\frac{13}{x} > 26$        $\frac{3}{4} > \frac{1+x}{2-x}$

⑨  $\frac{3x^2 - x - 2}{6x^2 - x - 7} < 0$

⑩  $\frac{8x^2 + 3x}{x^2 - 1} + \frac{5}{x-1} < \frac{4x}{x+1}$

$$\textcircled{1} \quad (-\infty; \frac{8}{19})$$

$$\textcircled{2} \quad S \neq \emptyset$$

$$\textcircled{3} \quad x < 4 \vee x > 5$$

$$\textcircled{4} \quad x \leq -\frac{1}{2} \vee x > \frac{1}{2}$$

$$x \leq 0 \vee x > \frac{5}{3}$$

$$\textcircled{5} \quad -4 < x < 1 \quad ; \quad x \neq \frac{3}{2} \quad (\nexists x \in \mathbb{R}) \quad (< \Rightarrow S = \emptyset) \quad (\leq \Rightarrow S = x = \frac{3}{2})$$

$$\textcircled{6} \quad x < 4 \quad ; \quad x \neq 1$$

$$\textcircled{7} \quad -1 < x < 1 \quad ; \quad x < 5 \wedge x \neq 0$$

$$\textcircled{8} \quad 0 < x < \frac{1}{2} \quad ; \quad x < \frac{2}{7} \vee x > 2$$

$$\textcircled{9} \quad -1 < x < -\frac{2}{3} \quad \vee \quad 1 < x < \frac{7}{6}$$

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