

Tutorato 3 - ICA
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Risolvere le seguenti disequazioni ed equazioni:

1. $\frac{x+2}{4x^2-1} > \frac{1}{2x+1}$

2. $\frac{x-1}{x+1} - x + 2x - 2 \leq 0$

3. $\begin{cases} x^2 - 3x + 2 > 0 \\ 2x - 1 < x + 2 \end{cases}$

4. $\begin{cases} \frac{x^2+2x}{x^2-4} - \frac{1}{x} > \frac{x-3}{x} \\ \frac{x^2+x-2}{x^3} > 0 \\ x^4 - x > 0 \end{cases}$

5. $\sqrt{x^2-4} > x-3$

6. $2x - \frac{3}{2} \geq \sqrt{x^2-3x+2}$

7. $\sqrt[3]{8x^3+9} > 2x+3$

8. $\sqrt{x+\frac{1}{2}} \leq x-1$

9. $2x - \sqrt{4x^2+3x-7} \geq 0$

10. $|x| < 2x+1$

11. $|3x-2| > -5+x$

12. $-x \geq 3 - |x-3|$

13. $(x+1)^2 - x(x+2) + 6 > |2x+2-3(x-1)|$

14. $|x-5| \leq |2x+1|$

15. $|x+2| + |x+1| + |x-1| + |x-2| > 6$

16. $\left| \frac{x-3}{2x+14} \right| \leq 2$

17. $\log(x+5) + \log(x-2) < \log(3x-1)$

18. $1 + \sqrt{2(\log x)^2 + 3 \log x - 2} \geq \log x$

19. $4 \sin x \tan x - \frac{3}{\cos x} = 0$

20. $\cos(2x) + \cos x = 0$

21. $(4 - \sqrt{6}) \sin^2 x - \sqrt{6} \cos^2 x + 2\sqrt{3} \sin x = 2\sqrt{2} \sin x$