

Risolvere le seguenti disequazioni di secondo grado:

$$174 \quad 1, \bar{1}(2x-1)^2 \geq 40 \quad \left[x \leq -\frac{5}{2} \vee x \geq \frac{7}{2} \right]$$

$$175 \quad \left(\frac{1}{2}x + \frac{1}{3}\right)\left(\frac{1}{3}x + \frac{1}{2}\right) \leq \left(\frac{1}{3}x + \frac{1}{2}\right)^2 \quad \left[-\frac{3}{2} \leq x \leq 1\right]$$

$$176 \quad \frac{1}{2}x - \frac{x+2}{3} \geq -x^2 + \frac{x}{6} \quad \left[x \leq -\frac{\sqrt{6}}{3} \vee x \geq \frac{\sqrt{6}}{3} \right]$$

$$177 \quad -(x-1)^2 - \frac{1}{3}(x+2)^2 \leq 0 \quad [\forall x \in \mathbb{R}]$$

$$178 \quad \frac{1}{2}(x-1) + \frac{x^2-2x}{4} < x^2 - \frac{1}{2}(2x-3)^2 \quad \left[\frac{4}{5} < x < 4\right]$$

$$189 \quad x(x-2)^2 - (x+2)^3 + 4 \geq (-x-2)(x+2) \quad \left[-\frac{4}{9} \leq x \leq 0\right]$$

$$190 \quad (x+1)(x-1)(x-2) - (x-2)^3 \leq 2^{-3} - 0,125 \quad \left[\frac{5}{4} \leq x \leq 2\right]$$

$$191 \quad x^2 - (x+\sqrt{2})^2 > (x+\sqrt{2})(x-\sqrt{2}) \quad [-2\sqrt{2} < x < 0]$$

$$192 \quad x^2 + \frac{x}{\sqrt{2}-1} \leq \frac{\sqrt{2}-x}{\sqrt{2}} - \frac{1}{\sqrt{2}+1} + \sqrt{2} - 2 \quad \left[\frac{-3\sqrt{2}-2}{2} \leq x \leq 0\right]$$

Risolvere le seguenti disequazioni di grado superiore al secondo:

$$250 \quad 2x^4 - x^2 - 1 < 0 \quad [-1 < x < 1]$$

$$251 \quad x^4 + 5x^2 - 14 \geq 0 \quad [x \leq -\sqrt{2} \vee x \geq \sqrt{2}]$$

$$252 \quad x^4 + 4x^2 + 3 > 0 \quad [\forall x \in \mathbb{R}]$$

$$289 \quad x^5 + x^2 - 4x^3 - 4 > 0 \quad [-2 < x < -1 \vee x > 2]$$

$$290 \quad x^4 - 2x^3 + x^2 - 2x \leq 0 \quad [0 \leq x \leq 2]$$

$$291 \quad x^3 + 2x^2 \geq \frac{1}{4}x + \frac{1}{2} \quad \left[-2 \leq x \leq -\frac{1}{2} \vee x \geq \frac{1}{2}\right]$$

$$292 \quad x^3 - \frac{1}{3}x^2 < 9x - 3 \quad \left[x < -3 \vee \frac{1}{3} < x < 3\right]$$

$$256 \quad x^4 - 10x^2 + 25 \leq 0 \quad [\pm\sqrt{5}]$$

$$257 \quad x^6 + 6x^3 - 7 \geq 0 \quad [x \leq -\sqrt[3]{7} \vee x \geq 1]$$

$$258 \quad -x^6 + 6x^3 + 16 \leq 0 \quad [x \leq -\sqrt[3]{2} \vee x \geq 2]$$

$$298 \quad 2x^3 - x - 1 > 0 \quad [x > 1]$$

$$299 \quad x^3 - 2x^2 + 1 > 0 \quad \left[\frac{1-\sqrt{5}}{2} < x < 1 \vee x > \frac{1+\sqrt{5}}{2}\right]$$

$$300 \quad x^3 - x^2 - 10x - 8 \leq 0 \quad [x \leq -2 \vee -1 \leq x \leq 4]$$

$$301 \quad x^3 - x^2 - 4 \leq 0 \quad [x \leq 2]$$

Risolvere le seguenti disequazioni frazionarie:

$$357 \quad \frac{x}{x^2-x-12} \leq 0 \quad [x < -3 \vee 0 \leq x < 4]$$

$$358 \quad \frac{2x^2+5x-7}{2x} \geq 0 \quad \left[-\frac{7}{2} \leq x < 0 \vee x \geq 1\right]$$

$$359 \quad \frac{x+x^2}{2x^2+x-3} \geq 0 \quad \left[x < -\frac{3}{2} \vee -1 \leq x \leq 0 \vee x > 1\right]$$

$$360 \quad \frac{x^2-2x+5}{x^2-4} \leq 0 \quad [-2 < x < 2]$$

$$361 \quad \frac{2x-x^2-3}{x^2+6x+8} \leq 0 \quad [x < -4 \vee x > -2]$$

$$373 \quad \frac{x^2-4x}{(3-x)(x^2+x+2)} \leq 0 \quad [0 \leq x < 3 \vee x \geq 4]$$

$$374 \quad \frac{(x+3)^3}{(x^2-x)(4-x^2)} \geq 0 \quad [x \leq -3 \vee -2 < x < 0 \vee 1 < x < 2]$$

$$375 \quad \frac{(x+2)^3 - (x^2-4)(x+1)}{x^5-4x^4} \leq 0 \quad \left[x \leq -2 \vee -\frac{6}{5} \leq x < 4, \text{ con } x \neq 0\right]$$

$$376 \quad \frac{(x-1)(x+2)^2 - (x-1)^3}{4x-8x^2} > 0 \quad \left[-\frac{1}{2} < x < 0 \vee \frac{1}{2} < x < 1\right]$$

389	$\frac{1}{2x-2} - \frac{1}{1-x} \geq \frac{2}{3x-3}$	$[x > 1]$
390	$-\frac{1}{2x+4} < \frac{x-1}{x+2}$	$\left[x < -2 \vee x > \frac{1}{2} \right]$
391	$\frac{x}{2-2x} - 1 \geq \frac{1}{3x-3}$	$\left[\frac{4}{9} \leq x < 1 \right]$
392	$-\frac{x+1}{3x-3} \leq \frac{1}{2-2x}$	$\left[x \leq \frac{1}{2} \vee x > 1 \right]$
393	$\frac{1}{x-\sqrt{2}} \geq \frac{1}{x\sqrt{2}-2} + \frac{1}{2}$	$[\sqrt{2} < x \leq 2]$
394	$\frac{x}{x+2} \geq \frac{1}{2x+4} + \frac{3}{2+x}$	$\left[x < -2 \vee x \geq \frac{7}{2} \right]$
395	$\frac{x+1}{x-1} - 1 \geq \frac{1}{2-2x}$	$[x > 1]$
396	$\frac{1}{x+2} + 1 > -\frac{1}{1-x}$	$\left[x < -\frac{1+\sqrt{21}}{2} \vee -2 < x < 1 \vee x < \frac{-1+\sqrt{21}}{2} \right]$
397	$\frac{x}{4x-12} - \frac{1}{12} \leq -\frac{x+1}{6-2x}$	$\left[x \leq -\frac{3}{4} \vee x > 3 \right]$
398	$\frac{(x-2)^2 - (x+2)^2}{4-2x} \geq 1 - \frac{1}{3x-6}$	$\left[x \leq -\frac{7}{9} \vee x > 2 \right]$