

Cognome:

Nome:

Trovare, se esistono, le soluzioni delle seguenti disequazioni.¹

$$1. \sqrt[3]{x+2} < \sqrt[3]{3} x$$

$$2. \sqrt{x^2 - 4} + 1 < 2x$$

$$3. \sqrt{x^2 - 3x - 28} \leq \sqrt{x^2 + x - 6}$$

$$4. \frac{|2x-3|-1}{|x|-2} \geq 0$$

$$5. \frac{2(x+4)-x^2}{|x-4|} > -x-3$$

$$6. \frac{x^2-5x+4}{-x^2+5x-6} \leq 0$$

¹File tex: verifica_03_disequazioni_rec_3e_2015.tex

Soluzioni.

$$\sqrt[3]{x+2} < \sqrt[3]{3} x$$

$$S = \{x \in \mathbb{R} \mid x > 1\}$$

$$\sqrt{x^2 - 4} + 1 < 2x$$

$$S = \{x \in \mathbb{R} \mid x \geq 2\}$$

$$\sqrt{x^2 - 3x - 28} \leq \sqrt{x^2 + x - 6}$$

$$S = \{x \in \mathbb{R} \mid -\frac{11}{2} \leq x \leq -4 \vee x \geq 7\}$$

$$\frac{|2x-3|-1}{|x|-2} \geq 0$$

$$S = \{x \in \mathbb{R} \mid x < -2 \vee (x \geq 1 \wedge x \neq 2)\}$$

$$\frac{2(x+4) - x^2}{|x-4|} > -x - 3$$

$$S = \{x \in \mathbb{R} \mid x > -\frac{5}{2} \wedge x \neq 4\}$$

$$\frac{x^2 - 5x + 4}{-x^2 + 5x - 6} \leq 0$$