

## Esercizi sul valore assoluto (con risposte)

Tuesday, September 28, 2021 11:15

Trovare il dominio naturale delle seguenti funzioni:

$$d) f(x) = \sqrt[4]{5 - |3x|}$$

$$\text{Resp.: } \left[-\frac{5}{3}, \frac{5}{3}\right]$$

$$b) f(x) = \sqrt{|x^2 - 2| - |3 - x|}$$

$$\text{Resp.: } \left(-\infty, -\frac{1}{2} - \frac{1}{2}\sqrt{21}\right] \cup \left[-\frac{1}{2} + \frac{1}{2}\sqrt{21}, +\infty\right)$$

$$c) f(x) = \sqrt{\frac{x^3 - |x|}{x^2 - 4}}$$

$$\text{Resp.: } (-2, 1] \cup (2, +\infty)$$

Risolvere le seguenti disequazioni:

$$d) |3x - 7| \leq 2 - x$$

$$\text{Resp.: nessuna sol.}$$

$$e) \left| \frac{2x - 5}{x + 1} \right| > 1$$

$$\text{Resp.: } x \in (-\infty, -1) \cup \left(-1, \frac{4}{3}\right) \cup (6, +\infty)$$

$$f) |x + 2| \leq |2x + 3| + 1$$

$$\text{Resp.: } x \in \mathbb{R}$$

$$g) |2x - 3| + 2 \leq |1 - x| - 1$$

$$\text{Resp.: nessuna sol}^{\text{ne}}$$

$$h) 1 < ||x| - 1| < 2$$

$$\text{Resp.: } x \in (-3, -2) \cup (2, 3)$$

$$i) ||2x - 1| - x| < 1$$

$$\text{Resp.: } x \in (0, 2)$$

$$j) \frac{1}{4 - |x|} \leq \frac{4}{2 - x}$$

$$\text{Resp.: } x \in (-\infty, -4) \cup \left[-\frac{14}{5}, 2\right) \cup \left(4, \frac{14}{3}\right]$$

$$k) |x^2 - 2| > x - 1$$

$$\text{Resp.: } x \in \left(-\infty, \frac{1}{2}(\sqrt{13} - 1)\right) \cup \left(\frac{1}{2}(\sqrt{5} + 1), +\infty\right)$$