

Esercizi con correzione

$$1. \quad \frac{x-1}{2x+2} + \frac{2x+1}{4x-2} > \frac{4x^2(2x+1)+1}{8x^3+8x^2-2x-2}$$

$$2. \quad \frac{x}{2} - \frac{2}{3} \cdot \frac{2x-3}{x-1} + \frac{10x-3}{6x-6} \leq \frac{3}{2} \cdot \frac{x^2+2}{3x-2}$$

Altri esercizi, senza correzione

$$1 \quad \frac{2-x}{5x-15} \leq \frac{5x-1}{2x-6}$$

$$2 \quad \frac{(3x-12)(6-x)}{(24-8x)(36-18x)} \leq 0$$

$$x \leq \frac{1}{3} \vee x > 3$$

$$x < 2 \vee 3 < x \leq 4 \vee x \geq 6$$

$$3 \quad \begin{cases} \left(1 - \frac{1}{x}\right) + 3\left(\frac{2}{x} + 1\right) > \frac{13}{2} \\ \frac{7+x}{2x} > \frac{2-x}{1-2x} \end{cases}$$

$$I.S. = \left\{ x \in \mathbb{R} \mid 0 < x < \frac{7}{17} \vee \frac{1}{2} < x < 2 \right\}$$

$$4 \quad \begin{cases} \frac{x^2-2x-3}{2x^2-x-1} \geq 0 \\ \frac{4x-1-3x^2}{x^2-4} \leq 0 \end{cases}$$

$$I.S. = \left\{ x \in \mathbb{R} \mid x < -2 \vee \frac{1}{3} \leq x < 1 \vee x \geq 3 \right\}$$

$$5 \quad \begin{cases} x^2-3x+2 \leq 0 \\ \frac{6}{2+x} - \frac{x+2}{x-2} > \frac{x^2}{4-x^2} \end{cases}$$

$$I.S. = \{x \in \mathbb{R} \mid 1 \leq x < 2\}$$