Elementi di matematica e statistica - Esercizi di ripasso prerequisiti

Diseguaglianze di primo grado:

$$A = \left\{ x \in \mathbf{R}; \frac{x^2 + 2}{x - 1} > x + 2 \right\}, B = \left\{ x \in \mathbf{R}; \frac{x}{x + 1} > \frac{x + 2}{x - 1} \right\},$$

$$C = \left\{ x \in \mathbf{R}; \frac{x + 1}{x - 1} + \frac{x + 2}{x - 2} > 2 \right\}, D = \left\{ x \in \mathbf{R}; \frac{x - 3}{x + 1} \leq 3 \right\}$$

$$E = \left\{ x \in \mathbf{R}; \frac{x + 6}{x + 2} > \frac{x + 1}{x - 3} \right\}, F = \left\{ x \in \mathbf{R}; \frac{x^2 + 2}{x - 2} > x - 1 \right\}$$

$$G = \left\{ x \in \mathbf{R}; \frac{x + 3}{x - 1} + \frac{x + 2}{x - 2} \leq 2 \right\}, H = \left\{ x \in \mathbf{R}; \frac{x - 1}{x + 2} \leq \frac{x + 4}{x - 3} \right\}.$$

Diseguahlianze di secondo grado:

$$A = \left\{ x \in \mathbf{R}; \frac{x + 1}{x - 2} \leq \frac{2x - 3}{x + 2} \right\}, B = \left\{ x \in \mathbf{R}; \frac{x^2 + x + 1}{x - 3} \geq 2x + 1 \right\}$$

$$C = \left\{ x \in \mathbf{R}; \sqrt{(x + 1)(2 - x}} \leq x - 1 \right\}, D = \left\{ x \in \mathbf{R}; \sqrt{(x + 2)(x - 1}} \leq \frac{x + 3}{2} \right\}.$$