

Esercitazione sulle disequazioni di primo grado

Sistemi di disequazioni

$a) \begin{cases} 2x+1 > x \\ 4x-1 \geq 0 \end{cases}$	$S = \left[\frac{1}{4}; +\infty \right[$	$b) \begin{cases} 4-x \leq -\frac{1}{2} \\ x+\frac{1}{3} > \frac{1}{3} \end{cases}$	$S = \left[\frac{9}{2}; +\infty \right[$
$c) \begin{cases} \frac{x-3}{4} < \frac{2x-1}{3} \\ 3x-\frac{1}{2} > \frac{x-4}{6} \end{cases}$	$S = \left] -1; -\frac{1}{17} \right[$	$d) \begin{cases} x^2 > \left(x-\frac{1}{4}\right)^2 - 3x \\ 2x^2 - 1 \geq x\left(2x-\frac{1}{4}\right) \end{cases}$	$S = [4; +\infty[$
$e) \begin{cases} 2x \geq -1 \\ x+1 < -3x+\frac{3}{2} \\ \frac{x+3}{8} > \frac{3}{16} \end{cases}$	$S = \left[-\frac{1}{2}; \frac{1}{8} \right[$	$f) \begin{cases} x^2 - 1 \leq (x+2)^2 \\ 2x(x+1) \geq \frac{1}{2}(2x-3)^2 \\ x - \frac{3}{2} < \frac{1}{4} \end{cases}$	$S = \left[\frac{9}{16}; \frac{7}{4} \right[$

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Disequazioni fratte

$a) \frac{2x-3}{x+3} > 0$	$S =]-\infty; -1[\cup \left] \frac{3}{2}; +\infty \right[$	$b) \frac{2-x}{x+3} \geq 0$	$S =]-3; 2]$
$c) \frac{4x-3}{3x+6} \leq 0$	$S = \left] -2; \frac{3}{4} \right]$	$d) \frac{1-x}{2-3x} < 0$	$S = \left] \frac{2}{3}; 1 \right[$
$e) \frac{x(x+2)}{2x-1} > 0$	$S =]-2; 0[\cup \left] \frac{1}{2}; +\infty \right[$	$f) \frac{x^2-4x}{(x+1)(2-x)} \geq 0$	$S =]-1; 0[\cup]2; 4]$
$g) \frac{x^2-4}{(2x+3)(1-x)} \leq 0$	$S =]-\infty; -2[\cup \left] -\frac{3}{2}; 1 \right[\cup [2; +\infty[$	$h) \frac{2x-3}{x^2-3x} > 0$	$S = \left] 0; \frac{3}{2} \right[\cup]3; +\infty[$
$i) \frac{4x}{x^2-4} < 0$	$S =]-\infty; -2[\cup]0; 2[$	$l) \frac{1-2x}{4x^2-1} \geq 0$	$S = \left] -\infty; -\frac{1}{2} \right[$
$m) \frac{x^2-9x}{(3-x)(x+3)} \leq 0$	$S =]-\infty; -3[\cup [0; 3[\cup [9; +\infty[$	$n) \frac{2x^2-6x}{3x(x+3)} \leq 0$	$S =]-3; 3] - \{0\}$