

risolvi i seguenti sistemi di disequazioni riconducibili al primo grado mediante scomposizione

1	$\begin{cases} x^2 - x > 0 \\ x + 1 \geq 0 \end{cases}$	$-1 \leq x < 0 \vee x > 1$
2	$\begin{cases} x^2 + 8x + 7 \geq 0 \\ -7x > 0 \end{cases}$	$x \leq -7 \vee -1 \leq x < 0$
3	$\begin{cases} x^2 - 6x + 9 \leq 0 \\ x - 3 \geq 0 \end{cases}$	$x = 3$
4	$\begin{cases} 3(x^2 - 4) \leq 0 \\ x - 3 \geq 0 \end{cases}$	\emptyset
5	$\begin{cases} 3x - 6 \geq 9 \\ 25 - x^2 \geq 0 \end{cases}$	$x = 5$
6	$\begin{cases} x^2 - 5x + 6 > 0 \\ (2x - 3)(x + 1) < 0 \end{cases}$	$-1 < x < \frac{3}{2}$
7	$\begin{cases} x^2 + 12x + 35 > 0 \\ x^2 - x - 6 > 0 \end{cases}$	$x < -7 \vee -5 < x < -2 \vee x > 3$
8	$\begin{cases} (2x - 3)(x + 1) \geq 0 \\ x - x^2 \leq 0 \end{cases}$	$x \leq -1 \vee x \geq \frac{3}{2}$

9	$\begin{cases} 12(x^2 - 16) > 0 \\ (x + 2)^7 > 0 \end{cases}$	$x > 4$
10	$\begin{cases} \frac{3x - 1}{x + 1} \geq 0 \\ 2x > 1 \end{cases}$	$x > \frac{1}{2}$
11	$\begin{cases} \frac{2x}{x + 5} \geq 2 \\ \frac{x}{3 - x} < 0 \end{cases}$	$x < -5$
12	$\begin{cases} \frac{3}{x} > \frac{1}{x} \\ \frac{x - 2}{2} + 1 \geq +x \end{cases}$	\emptyset
13	$\begin{cases} \frac{1}{2} - x \geq \frac{1}{2} \\ \frac{2x - 3}{x + 1} \leq \frac{1}{2} \end{cases}$	$-1 < x \leq 0$
14	$\begin{cases} \frac{x + 3}{x} \geq 0 \\ \frac{x - 5}{2 - 2x} \leq 1 \end{cases}$	$x \leq -3 \vee 0 < x < 1 \vee x \geq \frac{7}{3}$
15	$\begin{cases} \frac{2x + 3}{x + 5} > 0 \\ \frac{x}{x + 6} \leq 6 \end{cases}$	$x < -\frac{36}{5} \vee -6 < x < -5 \vee x > -\frac{3}{2}$
16	$\begin{cases} \frac{1}{x - 4} > 0 \\ \frac{7}{5 - x} > 0 \end{cases}$	$4 < x < 5$

17	$\begin{cases} \frac{x-5}{x-3} > 1 \\ x-2(1-x) \geq 2x \end{cases}$	$2 \leq x < 3$
18	$\begin{cases} \frac{x-1}{5-x} > 0 \\ 2x-3 > 0 \end{cases}$	$\frac{3}{2} < x < 5$
19	$\begin{cases} x^2 - 5x + 6 < 0 \\ \frac{x-2}{x+1} \geq 0 \end{cases}$	$2 < x < 3$
20	$\begin{cases} \frac{x-1}{5-x} > 0 \\ 2x-3 > 0 \end{cases}$	$\frac{3}{2} < x < 5$
21	$\begin{cases} \frac{1}{x} \geq \frac{2}{x} \\ \frac{x}{x-2} \leq 1 \end{cases}$	$x < 0$
22	$\begin{cases} x^2 < (x+1)(x+2) \\ \frac{1}{x+3} \geq \frac{1}{x-3} \end{cases}$	$-\frac{2}{3} < x < 3$
23	$\begin{cases} \frac{(2x-1)(1-x)}{(3x-1)x} > 0 \\ \frac{4x-1}{3x-2} \geq 0 \end{cases}$	$0 < x \leq \frac{1}{4} \vee \frac{2}{3} < x < 1$
24	$\begin{cases} \frac{x(1+x)}{3x-1} \geq 0 \\ \frac{1}{1-2x} > 0 \end{cases}$	$-1 \leq x \leq 0 \vee \frac{1}{3} < x < \frac{1}{2}$

25	$\begin{cases} \frac{(x-3)(1+x)}{1-2x} \geq 0 \\ \frac{(2-x)(4-x)}{x} \leq 0 \end{cases}$	$x \leq -1 \vee 2 \leq x \leq 3$
26	$\begin{cases} \frac{x-4}{x-3} > \frac{5-x}{4-x} \\ \frac{1-2x}{x+5} > 1 - \frac{x+3}{x+5} \end{cases}$	$-5 < x < -\frac{1}{2}$
27	$\begin{cases} \frac{x^2-4}{x+3} \geq 0 \\ \frac{x-1}{x-5} \leq 0 \end{cases}$	$2 \leq x < 5$
28	$\begin{cases} \frac{13}{x+4} \leq \frac{15}{2x-3} \\ \frac{1-x}{2} \leq 1-x \end{cases}$	$x < -4$
29	$\begin{cases} \frac{1}{x-2} - 1 \leq -\frac{3}{2-x} \\ \frac{x}{x-1} \leq \frac{3}{2(x-1)} \end{cases}$	\emptyset
30	$\begin{cases} \frac{2x+3}{x+3} < \frac{3}{2} \\ \frac{8-x}{x-3} > \frac{2-x}{x} \end{cases}$	$-2 < x < 0$
31	$\begin{cases} \frac{9}{x-1} \leq \frac{4}{x+2} \\ \frac{5x}{x+1} \leq 6 \end{cases}$	$x \leq -6 \vee -1 < x < 1$
32	$\begin{cases} \frac{x+3}{2x-1} < 0 \\ \frac{x+2}{x+8} \leq 0 \end{cases}$	$-3 < x \leq -2$

33	$\begin{cases} \frac{x^2 - 2x}{(x+1)(5-x)} \geq 0 \\ \frac{x+1}{x^2-9} < \frac{1}{x+3} \end{cases}$	$-1 < x \leq 0 \vee 2 \leq x < 3$
34	$\begin{cases} \frac{x-2}{x+3} \geq 0 \\ 7+2x > -\frac{x^2}{7} \end{cases}$	$x < -7 \vee -7 < x < -3 \vee x \geq 2$
35	$\begin{cases} \frac{1+x^2}{3x} \leq 0 \\ x < (x+2)(3-x) \end{cases}$	$-\sqrt{6} < x < 0$
36	$\begin{cases} \frac{x-1}{x+2} \leq \frac{-1}{x-3} \\ 3 - \frac{4-x}{3} + \frac{3-x}{2} \geq 2 \end{cases}$	$-2 < x < 3$
37	$\begin{cases} \frac{2x-3}{x-5} \leq 0 \\ \frac{13}{x} - 5 < 21 \end{cases}$	$\frac{3}{2} \leq x < 5$
38	$\begin{cases} 2 + \frac{1}{x} < \frac{2}{5x} \\ \frac{2x-1}{2} \cdot \frac{x}{4} + \frac{6x-1}{4} \leq \left(\frac{x}{2} + 1\right)^2 + \frac{3}{8}x \end{cases}$	$-\frac{3}{10} < x < 0$

39	$\begin{cases} \frac{2x-5}{x^2-4} \geq 0 \\ \frac{x^2-3x}{2+3x} < 0 \end{cases}$	$-2 < x < -\frac{2}{3} \vee 0 < x < 2 \vee \frac{5}{2} \leq x < 3$
40	$\begin{cases} 35 \leq -7x \\ 2(x-2) < 4 \\ x^2 < 4(x+3) \end{cases}$	\emptyset
41	$\begin{cases} (1-2x)(3-2x)(1-4x) \geq 0 \\ (5+2x)(3x+1) \leq 0 \\ -\frac{1}{2}x \geq 0 \end{cases}$	$-\frac{5}{2} \leq x \leq -\frac{1}{3}$
42	$\begin{cases} \frac{9}{x+5} < 0 \\ (x+8)(7-x) \geq 0 \\ \frac{8-x}{13} > 0 \end{cases}$	$-8 \leq x < -5$
43	$\begin{cases} \frac{1}{x^2-x} \geq \frac{2}{x-1} - \frac{1}{x} \\ 3x - 2(1-x) \geq 2x \\ \frac{-1}{x-3} > \frac{1}{x-3} \end{cases}$	$\frac{2}{3} \leq x < 1$
44	$\begin{cases} \frac{1}{x-3} - \frac{1}{x+3} \leq 0 \\ \frac{x}{x-2} + \frac{2+3x}{x+1} > 4 \\ \frac{x+5}{7} \geq 0 \end{cases}$	$-3 < x < -1 \vee 2 < x < 3$

45	$\begin{cases} \frac{x+2}{4} - \frac{x-4}{2} < 3 - \frac{x}{3} \\ \frac{5x-2}{3} + 1 > \frac{2x-3}{2} \\ x^2 - 2x - 3 > 0 \end{cases}$	$-\frac{11}{4} < x < -1 \vee 3 < x < 6$
46	$\begin{cases} -x^2 + 6x + 7 > 0 \\ -x^2 + 8x - 15 < 0 \\ \frac{2x+1}{5} - 1 > \frac{2-x}{3} \end{cases}$	$2 < x < 3 \vee 5 < x < 7$
47	$\begin{cases} \frac{14}{x+2} < 0 \\ (x+10)(8-x) > 0 \\ \frac{14-x}{18} > 0 \end{cases}$	$-10 < x < -2$