

risolvi i seguenti sistemi di disequazioni di secondo grado intere

1	$\begin{cases} 12(x^2 - 16) > 0 \\ x + 2 > 0 \end{cases}$	$x > 4$
2	$\begin{cases} x^2 + 5x - 6 < 0 \\ 2x + 3 > x + 2 \end{cases}$	$-1 < x < 1$
3	$\begin{cases} x^2 - 7x + 12 \geq 0 \\ x - 2 \leq 8 \end{cases}$	$x \leq 3 \vee 4 \leq x \leq 10$
4	$\begin{cases} x^2 + 5x - 6 < 0 \\ 2x - 5 > x + 20 \end{cases}$	\emptyset
5	$\begin{cases} x^2 - 5x < 0 \\ x - 2 > 0 \end{cases}$	$2 < x < 5$
6	$\begin{cases} x^2 - x - 6 \leq 0 \\ x^2 + 3x - 4 < 0 \end{cases}$	$-2 \leq x < 1$
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	$\begin{cases} x^2 - 9x > 0 \\ 5x^2 - 7x + 1 > 0 \end{cases}$	$x < 0 \vee x > 9$
9	$\begin{cases} x^2 - 5x + 6 > 0 \\ x^2 - 16 < 0 \end{cases}$	$-4 < x < 2 \vee 3 < x < 4$
10	$\begin{cases} 3x^2 - 5x - 2 > 0 \\ x^2 - 4x + 3 < 0 \end{cases}$	$2 < x < 3$

11	$\begin{cases} x^2 - 5x + 6 > 0 \\ (2x - 3)(x + 1) < 0 \end{cases}$	$-1 < x < \frac{3}{2}$
12	$\begin{cases} (x + 3)^2 > x^2 - 9 \\ (x + 1)^2 > (x + 2)^2 \end{cases}$	$-3 < x < -\frac{3}{2}$
13	$\begin{cases} 7x(x + 2) - 2 > x + 4(5x^2 - 3x) + 5(5x - 3) \\ 2(x + 6) + x^2 \leq 2x(2x + 1) \end{cases}$	\emptyset
14	$\begin{cases} 3(4x + 1)(4x - 1) > 6 - x^2 \\ 3(x^2 - 2) < 43 \end{cases}$	$-\frac{7}{\sqrt{3}} < x < -\frac{3}{7} \vee \frac{3}{7} < x < \frac{7}{\sqrt{3}}$
15	$\begin{cases} (3x - 5)(2x - 5) > (x + 3)(x - 1) \\ 4(x^2 - 1) < 4x - 1 \end{cases}$	$-\frac{1}{2} < x < \frac{7}{5}$
16	$\begin{cases} 2(5x^2 - 9) < 6x^2 + 63 \\ 3x - 2 \leq 5 - \frac{x}{2} \end{cases}$	$-\frac{9}{2} < x \leq 2$
17	$\begin{cases} -x(x + 2) > -2 \\ \frac{x}{4} \leq x - \frac{5 - x}{2} + \frac{5}{2} \end{cases}$	$0 \leq x < -1 + \sqrt{3}$
18	$\begin{cases} 4x - 1 > \frac{1}{3}(x - 2) + 2x \\ x^2 - 3x + 2 > 0 \end{cases}$	$\frac{1}{5} < x < 1 \vee x > 2$
19	$\begin{cases} 3x^2 \leq 4x + 7 \\ \frac{2x - 3}{5} + \frac{x}{2} < \frac{x - 5}{2} + 3 \end{cases}$	$-1 \leq x \leq \frac{7}{3}$
20	$\begin{cases} x\left(x - \frac{1}{4}\right) < x^2 - \frac{1}{36} - \frac{x}{3} + \frac{1}{12} \\ 3x + 2 > 4x(x - 1) \end{cases}$	$-\frac{1}{4} < x < \frac{2}{3}$

21	$\begin{cases} \frac{x}{2}(x+1) - x - \frac{x}{2} > 2 - x^2 + 2(x+1) \\ x(x-5+2x-10) < 0 \end{cases}$	$\frac{3 + \sqrt{33}}{3} < x < 5$
22	$\begin{cases} 2\left(x - \frac{1}{2}\right)x + 2x - \frac{1}{3} > 4\left(x - \frac{1}{3}\right) \\ (x-1)^2 + 1 < 3(1-x) \end{cases}$	$\frac{-1 - \sqrt{5}}{2} < x < \frac{1}{2}$
23	$\begin{cases} \frac{x}{2}(x+1) - 3x + 5 > 2 \\ x^2 + 3x - 4 > 0 \end{cases}$	$x < -4 \vee 1 < x < 2 \vee x > 3$
24	$\begin{cases} x\left(x + \frac{1}{2}\right) - 3x - 1 < -\frac{3}{2}x - \frac{1}{4} \\ 2x^2 - 3x + 4 > 0 \end{cases}$	$-\frac{1}{2} < x < \frac{3}{2}$
25	$\begin{cases} 2\left(x - \frac{1}{2}\right)x + 2x - \frac{1}{3} > 4\left(x - \frac{1}{3}\right) \\ (x-1)^2 + 1 < 3(1-x) \end{cases}$	$\frac{-1 - \sqrt{5}}{2} < x < \frac{1}{2}$
26	$\begin{cases} \frac{x}{2}(x+1) - 3x + 5 > 2 \\ x^2 + 3x - 4 > 0 \end{cases}$	$x < -4 \vee 1 < x < 2 \vee x > 3$
27	$\begin{cases} x\left(x + \frac{1}{2}\right) - 3x - 1 < -\frac{3}{2}x - \frac{1}{4} \\ 2x^2 - 3x + 4 > 0 \end{cases}$	$-\frac{1}{2} < x < \frac{3}{2}$
28	$\begin{cases} (3x+1)^2 \leq \left(x - \frac{5}{3}\right) + 1 + \frac{2}{3}x \\ (3x-2)x + x - \frac{2}{3} < \frac{4}{3} - 2x \end{cases}$	\emptyset
29	$\begin{cases} \left(x - \frac{1}{2}\right)^2 + \frac{(x-3)^2}{4} - 33 > \frac{3-10x}{4} \\ x\left(x - \frac{1}{2}\right) < \frac{1}{2} \end{cases}$	\emptyset
30	$\begin{cases} \frac{x^2}{2} - \frac{1-6x^2}{12} > \frac{4-x^2}{3} \\ \frac{x(x+4)}{9} - 1 < x - \frac{2x+1}{3} \end{cases}$	$-3 < x < -\frac{\sqrt{17}}{4} \vee \frac{\sqrt{17}}{4} < x < 2$

31	$\begin{cases} \frac{(x^2 - 1)}{2} - \frac{2}{3}(x + 1) > \frac{x - 5}{6} \\ \frac{x + 1}{2} + \frac{2x - 3}{4} \leq x^2 - 1 \end{cases}$	$x \leq -\frac{1}{2} \vee x > 2$
32	$\begin{cases} 3x^2 - 2x + 7 < 0 \\ 2x\left(2x - \frac{1}{3}\right) > \frac{7}{4}x + 5 \end{cases}$	\emptyset
33	$\begin{cases} \frac{x^2}{2} + \frac{x + 1}{5} > -2 \\ \frac{x - 2}{7} - \frac{x^2 - 1}{2} < 3 \end{cases}$	R
34	$\begin{cases} x(x - 4) + \frac{3x + 1}{4} \geq \frac{3}{4}(1 + x) - \frac{3}{4} \\ 3x^2 + 7x + 2 > 0 \end{cases}$	$x < -2 \vee -\frac{1}{3} < x \leq \frac{4 - \sqrt{15}}{2} \vee x \geq \frac{4 + \sqrt{15}}{2}$
35	$\begin{cases} 3x - \frac{1}{2} > x + \frac{3}{2}(x - 5) \\ x(x + 8) - 27 \leq 3(x - 1) \end{cases}$	$-8 \leq x \leq 3$
36	$\begin{cases} \frac{x + 2}{5} + \frac{x^2 + 1}{2} \geq 3 \\ (2x - 1)^2 - 3x(x - 1) \leq x + 9 \end{cases}$	$\frac{\sqrt{106} - 1}{5} \leq x \leq 4$
37	$\begin{cases} x(x - 2) + \frac{5}{2}x > 6(x - 1) - \frac{x}{2} \\ \frac{(x + 1)^2}{3} + \frac{x^2 - 1}{2} - 3x \leq \frac{3}{2}(x + 1)^2 - \frac{2x^2 - 11}{3} \end{cases}$	$-1 \leq x < 2 \vee x > 3$
38	$\begin{cases} (x + 1)^2 - \frac{5}{2} < x(x + 1) + \frac{x}{2} \\ \frac{2 - x^2 - 4x}{5} < \frac{x + 5}{2} - \frac{(2x - 3)(x - 1)}{10} \end{cases}$	$-1 < x < 3$

39	$\begin{cases} 3x^2 - 8x + 5 > \frac{(5x - 8)^2 - (4x - 7)^2}{3} \\ \frac{x}{2} + \frac{2x - 1}{3} > 3 \end{cases}$	\emptyset
40	$\begin{cases} 2x - \frac{2(x - 2)}{3} \geq x - 1 + \frac{x - 1}{2} \\ 3\left(x + \frac{1}{3}\right)^2 > \left(x - \frac{1}{3}\right)(x - 3) \end{cases}$	$x < -\frac{4 + \sqrt{19}}{3} \vee \frac{\sqrt{19} - 4}{3} < x \leq 17$
41	$\begin{cases} \frac{7}{4} - \frac{3}{2}(4x - 1) \geq (3x - 1)^2 \\ 2x^2 - \frac{x}{2} > x^2 - \frac{2}{5}\left(x - \frac{11}{10}\right) - \frac{x}{10} \end{cases}$	\emptyset
42	$\begin{cases} \frac{x(2x - 1)}{2} - \frac{(3x - 1)(x + 2)}{6} + 2\frac{(x^2 - 1)}{3} > \frac{1 - 2x}{2} \\ (3x - 2)^2 < 2(x^2 + 6) + 2x(3x - 2) \end{cases}$	$4 - 2\sqrt{6} < x < -\frac{5}{7} \vee 1 < x < 4 + 2\sqrt{6}$
43	$\begin{cases} x(x - \sqrt{2}) - \frac{(x\sqrt{2} - 1)^2}{2} + \frac{x + \sqrt{2}}{2} > 1 \\ \left(\frac{1}{3}x - 2\right)(x - 1) + (x - 1)^2 < x^2 - x \end{cases}$	$3 - \sqrt{2} < x < 9$
44	$\begin{cases} x + 3 > 0 \\ 4x^2 - x + 1 > 0 \\ x^2 + x - 2 \geq 0 \end{cases}$	$-3 < x \leq -2 \vee x \geq 1$
45	$\begin{cases} x + 50 > 10x \\ (x - 3)^2 + 3x^2 - 4 < (2x - 1)^2 \\ (x + 3)^2 > x^2 - 7x + 9 \end{cases}$	$2 < x < \frac{50}{9}$

46	$\begin{cases} x > 2 \\ 6(x - 1) - 1 > x(x - 2) \\ x(x - 2) \leq 4(x - 1) - 5 \end{cases}$	$x = 3$
47	$\begin{cases} x - x^2 > 0 \\ 2x^2 + 3x - 5 < 0 \\ x^2 + 5x + 6 > 0 \end{cases}$	$0 < x < 1$
48	$\begin{cases} x^2 + 3x + 2 > 0 \\ 4(x + 1) > 1 - x^2 \\ x^2 + x + 1 < 0 \end{cases}$	\emptyset
49	$\begin{cases} 2x(x + 5) > 3(x + 1)^2 \\ x^2 + 4x + 3 > 3(x - 1)^2 \\ x^2 - 16 < (2x - 7)^2 \end{cases}$	$1 < x < 3$
50	$\begin{cases} \frac{2x + 1}{5} - \frac{2 - x}{3} > 1 \\ x^2 - 6x + 7 < 0 \\ x^2 - 8x + 15 > 0 \end{cases}$	$2 < x < 3$
51	$\begin{cases} \frac{x + 2}{4} + \frac{x}{3} < \frac{x - 4}{2} \\ \frac{5x - 2}{3} + 1 > \frac{2x - 3}{2} \\ x^2 - 2x - 3 > 0 \end{cases}$	\emptyset
52	$\begin{cases} (x - 1)^2 < (2x + 1)(x + 1) \\ 12x^2 + x - 1 > 0 \\ x^2 + 6x < 6 + \frac{x}{8} + \frac{(x + 2)(2x - 3)}{4} \end{cases}$	$-12 < x < -5 \vee \frac{1}{4} < x < \frac{3}{4}$

53	$\begin{cases} 2x^2 > 3(9 - x) \\ x \frac{x - 5}{5} < 5x + \frac{64}{5} \\ (x + 4)(2x + 5) > 0 \end{cases}$	$3 < x < 32$
54	$\begin{cases} (3x - 5)^2 < 12x - 5 \\ (2x + 1)(2x - 3) - 4x + 6 > \left(x + \frac{1}{2}\right)^2 \\ 2x - \frac{x^2 - 7}{4} > \frac{4x - 1}{2} \end{cases}$	$\frac{9 + 4\sqrt{3}}{6} < x < 3$
55	$\begin{cases} \left(x + \frac{3}{2}\right)^2 \geq \frac{9}{4} \\ x + \frac{7}{4} < \frac{3}{4} \\ (x + 5)^2 = x + 5 \end{cases}$	$x = -5 \quad x = -4$
56	$\begin{cases} x^2 + 2x - 3 > 0 \\ x + \frac{19}{2} \geq \frac{7}{2} \\ x^2 + x - 12 \geq 0 \end{cases}$	$-6 \leq x \leq -4 \vee x \geq 3$
57	$\begin{cases} \frac{x + 3}{2} > \frac{2x + 9}{6} \\ 2(x + 2) - 4 < 3(x + 2)^2 - 7 \\ 2x + 3(x + 2) < 16 \end{cases}$	$0 < x < 2$

risolvi i seguenti sistemi di disequazioni di secondo grado frazionarie

58	$\begin{cases} x^2 - 5x + 6 < 0 \\ \frac{x-2}{x+1} \geq 0 \end{cases}$	$2 < x < 3$
59	$\begin{cases} \frac{x-2}{x+3} \geq 0 \\ 7 + 2x > -\frac{x^2}{7} \end{cases}$	$x < -7 \vee -7 < x < -3 \vee x \geq 2$
60	$\begin{cases} \frac{1+x^2}{3x} \leq 0 \\ x < (x+2)(3-x) \end{cases}$	$-\sqrt{6} < x < 0$
61	$\begin{cases} \frac{x-1}{x+2} \leq \frac{-1}{x-3} \\ 3 - \frac{4-x}{3} + \frac{3-x}{2} \geq 2 \end{cases}$	$-2 < x < 3$
62	$\begin{cases} 2 + \frac{1}{x} < \frac{2}{5x} \\ \frac{2x-1}{2} \cdot \frac{x}{4} + \frac{6x-1}{4} \leq \left(\frac{x}{2} + 1\right)^2 + \frac{3}{8}x \end{cases}$	$-\frac{3}{10} < x < 0$
63	$\begin{cases} (x - \sqrt{2})(x + \sqrt{2}) \geq 2(-x - 1) - 1 \\ \frac{x^2 - 5x + 6}{x^2 - 6x - 7} > 0 \end{cases}$	$x < -1 \vee 2 < x < 3 \vee x > 7$
64	$\begin{cases} \frac{2x-5}{x^2-4} \geq 0 \\ \frac{x^2-3x}{2+3x} < 0 \end{cases}$	$-2 < x < -\frac{2}{3} \vee 0 < x < 2 \vee \frac{5}{2} \leq x < 3$

65	$\begin{cases} \frac{3x-1}{x-1} + \frac{x+3}{2x-2} > 2 \\ \frac{3x-x^2+10}{x^2-2x+1} \geq 0 \end{cases}$	$-2 \leq x < -\frac{5}{3} \vee 1 < x \leq 5$
66	$\begin{cases} \frac{x^2-2x}{(x+1)(5-x)} \geq 0 \\ \frac{x+1}{x^2-9} < \frac{1}{x+3} \end{cases}$	$-1 < x \leq 0 \vee 2 \leq x < 3$
67	$\begin{cases} \frac{14}{x+2} < 0 \\ (x+10)(8-x) > 0 \\ \frac{14-x}{18} > 0 \end{cases}$	$-10 < x < -2$
68	$\begin{cases} \frac{x+2}{4} - \frac{x-4}{2} < 3 - \frac{x}{3} \\ \frac{5x-2}{3} + 1 > \frac{2x-3}{2} \\ x^2 - 2x - 3 > 0 \end{cases}$	$-\frac{11}{4} < x < -1 \vee 3 < x < 6$
69	$\begin{cases} -x^2 + 6x + 7 > 0 \\ -x^2 + 8x - 15 < 0 \\ \frac{2x+1}{5} - 1 > \frac{2-x}{3} \end{cases}$	$2 < x < 3 \vee 5 < x < 7$