

risolvi le seguenti disequazioni di secondo grado intere

1	$x^2 > 0$	$x \neq 0$
2	$x^2 \geq 0$	$R$
3	$-5x^2 < 0$	$x \neq 0$
4	$3x^2 < 0$	$\emptyset$
5	$-\frac{5}{4}x^2 > 0$	$\emptyset$
6	$-5x^2 - 1 > 0$	$\emptyset$
7	$x^2 - 5x < 0$	$0 < x < 5$
8	$3x^2 + 2x \geq 0$	$x \leq -\frac{2}{3} \vee x \geq 0$
9	$6x^2 - 5x \leq 0$	$0 \leq x \leq \frac{5}{6}$
10	$2x - x^2 \leq 0$	$x \leq 0 \vee x \geq 2$
11	$x^2 - 4 > 0$	$x < -2 \vee x > 2$
12	$2x^2 + 13 < 0$	$\emptyset$
13	$x^2 - 9 < 0$	$-3 < x < 3$
14	$x^2 + 1 > 0$	$R$
15	$(x - 1)^2 < 0$	$\emptyset$

16	$x^2 + \sqrt{2} > 0$	$R$
17	$x^2 - 64 \geq 0$	$x \leq -8 \vee x \geq 8$
18	$x^2 - 81 \geq 0$	$x \leq -9 \vee x \geq 9$
19	$32 - 2x^2 \geq 0$	$-4 \leq x \leq 4$
20	$27 - 3x^2 \geq 0$	$-3 \leq x \leq 3$
21	$-3x^2 - x \leq 0$	$x \leq -\frac{1}{3} \vee x \geq 0$
22	$-5x^2 - x \leq 0$	$x \leq -\frac{1}{5} \vee x \geq 0$
23	$3x^2 + 2x - 1 \geq 0$	$x \leq -1 \vee x \geq \frac{1}{3}$
24	$4x^2 - 6x + 2 \geq 0$	$x \leq \frac{1}{2} \vee x \geq 1$
25	$6x^2 - 5x + 2 \leq 0$	$\emptyset$
26	$3x^2 - 6x + 4 \leq 0$	$\emptyset$
27	$2x - x^2 - 1 \leq 0$	$R$
28	$4x - x^2 - 4 \leq 0$	$R$
29	$x^2 - x + 5 > 0$	$R$

30	$x^2 + x + 4 > 0$	$R$
31	$2x^2 + 13x + 6 < 0$	$-6 < x < -\frac{1}{2}$
32	$8x^2 - 6x + 1 < 0$	$\frac{1}{4} < x < \frac{1}{2}$
33	$x^2 - 10x + 25 < 0$	$\emptyset$
34	$x^2 - 14x + 49 < 0$	$\emptyset$
35	$-3x^2 + 5x - 2 > 0$	$\frac{2}{3} < x < 1$
36	$-2x^2 + 7x - 5 \leq 0$	$x \leq 1 \vee x \geq \frac{5}{2}$
37	$-x^2 - 10x - 25 < 0$	$x \neq -5$
38	$9x^2 - 6x + 1 < 0$	$\emptyset$
39	$6x - x^2 - 9 > 0$	$\emptyset$
40	$2x^2 - x + 1 > 0$	$R$
41	$x^2 + 3 - x > 0$	$R$
42	$4x^2 - 5x < -1$	$\frac{1}{4} < x < 1$
43	$x^2 - 2x + 10 > 0$	$R$

44	$2x^2 - 5x - 11 > 0$	$x < \frac{5 - \sqrt{113}}{4} \vee x > \frac{5 + \sqrt{113}}{4}$
45	$x^2 - 3x - 6 < 0$	$\frac{3 - \sqrt{33}}{2} < x < \frac{3 + \sqrt{33}}{2}$
46	$5x^2 - x + 6 < 0$	$\emptyset$
47	$4x^2 - 12x + 9 \leq 0$	$x = \frac{3}{2}$
48	$6x - x^2 - 9 \leq 0$	$R$
49	$x^2 + 10x - 9 \geq 0$	$x \leq -5 - \sqrt{34} \vee x \geq -5 + \sqrt{34}$
50	$x^2 + 4x - 21 > 0$	$x < -7 \vee x > 3$
51	$6x^2 + 7x - 3 \geq 0$	$x \leq -\frac{3}{2} \vee x \geq \frac{1}{3}$
52	$4x^2 - 4x + 1 > 0$	$x \neq \frac{1}{2}$
53	$-x^2 + 8x - 16 > 0$	$\emptyset$
54	$2x^2 + x + 4 > 0$	$R$
55	$25x^2 + 10x + 1 < 0$	$\emptyset$
56	$4x^2 - 3x - 1 > 0$	$x < -\frac{1}{4} \vee x > 1$
57	$x^2 - 8x + 16 < 0$	$\emptyset$

58	$5x^2 - 3x + 1 > 0$	$R$
59	$(2x + 5)(x - 1) < 0$	$-\frac{5}{2} < x < 1$
60	$2x^2 > 3(9 - x)$	$x < -\frac{9}{2} \vee x > 3$
61	$9(3x^2 + 2) > 16(x - 3)$	$R$
62	$(x - 1)^2 - 2x^2 + 3 > 3x^2 - 2x + 1$	$-\frac{\sqrt{3}}{2} < x < \frac{\sqrt{3}}{2}$
63	$x - 1 < (x + 3)^2 - 4x + 6$	$R$
64	$(3x - 2)^2 + 3 < 5x - (2x - 1)^2$	$\frac{8}{13} < x < 1$
65	$2(1 - 3x) + 3(2x^2 + 1) \leq 5x + 2$	$\frac{1}{3} \leq x \leq \frac{3}{2}$
66	$5 - 2(x + 1)^2 > 8x + 13$	$-5 < x < -1$
67	$3(1 - 2x) + 2(1 + 3x^2) - 5x \leq 2$	$\frac{1}{3} \leq x \leq \frac{3}{2}$
68	$11 - 2(x + 2)^2 > 4x + 13$	$-5 < x < -1$
69	$2(2 - x)(2 + x) - 5(x + 1)(x - 1) - 13x \leq 11$	$x \leq -2 \vee x \geq \frac{1}{7}$
70	$5(1 - x)(1 + x) - 11 \leq 13x - 2(2 - x)(2 + x)$	$x \leq -2 \vee x \geq \frac{1}{7}$
71	$3x^2 - 4x + 3 + 2x \leq (2x - 3)^2$	$x \leq 5 - \sqrt{19} \vee x \geq 5 + \sqrt{19}$

72	$11x^2 - 3(4x - 5) > 7(x + 4) - 3x^2$	$x < -\frac{1}{2} \vee x > \frac{13}{7}$
73	$(2x - 3)^2 \leq x^2 - (x + 2)(x - 3)$	$\frac{1}{4} \leq x \leq 3$
74	$(x + 2)^2 - (x + 1)^2 \geq x^2 - 6x + 18$	$3 \leq x \leq 5$
75	$(x - 3)(x^2 - 10x + 22) + (2x - 9)(x - 8) > (x - 4)^3 - 10$	$x < 5 \vee x > 16$
76	$4x^2 - \frac{3}{2}x + (x - 1)^2 < 2(x^2 - 3) + \frac{1}{4}$	$\emptyset$
77	$4x^2 - \frac{3}{2}x < 7(x^2 - 3) + \frac{1}{3}(x - 4)^2$	$x < -2 \vee x > \frac{47}{20}$
78	$3(2x^2 - 1) + (x - 3)^2 - 7x - \frac{2}{3} \leq -x^2 - 1$	$\emptyset$
79	$2\sqrt{3}x - 2x^2 - 4x < x^2 - 2$	$x < -\frac{\sqrt{3} + 1}{3} \vee x > \sqrt{3} - 1$
80	$\sqrt{3}x^2 - 3x - 2\sqrt{3} < 0$	$\frac{\sqrt{3} - \sqrt{11}}{2} < x < \frac{\sqrt{3} + \sqrt{11}}{2}$
81	$-x^2 - 3x > x^2 + 5 - (x + 3)^2$	$-1 < x < 4$
82	$\left(x - \frac{1}{2}\right)(x + 3) < \frac{x}{2}(x - 2)$	$\frac{-7 - \sqrt{61}}{2} < x < \frac{-7 + \sqrt{61}}{2}$
83	$\left(\frac{x}{2} - \frac{3}{4}\right)x - \frac{x - 3}{2} < \left(\frac{x}{4} - \frac{2}{3}\right)x - \frac{x - 6}{4}$	$0 < x < \frac{4}{3}$
84	$2\left(\frac{x}{3} - 2\right)^2 - \frac{1}{4}x^2 + 3x > -2x + \frac{1}{2}$	$42 - 3\sqrt{226} < x < 42 + 3\sqrt{226}$
85	$\left(x - \frac{2}{3}\right)\left(x - \frac{2}{3}\right) - x^2 + x < -x + \frac{1}{2}x^2$	$x \leq \frac{2 - 2\sqrt{3}}{3} \vee x \geq \frac{2 + 2\sqrt{3}}{3}$

86	$\left(3x - \frac{1}{2}\right) - \left(2x - \frac{1}{3}\right)(x + 1) \leq 6x + \frac{7}{12}$	$x \leq \frac{-14 - \sqrt{142}}{12} \vee x \geq \frac{-14 + \sqrt{142}}{12}$
87	$x + (x - 3)(x + 3) - \frac{x^2 - 5}{3} - \frac{5}{3} > 0$	$x < -\frac{9}{2} \vee x > 3$
88	$2x - \frac{2x^2 - 5}{3} - 3(x - x^2) - \frac{7}{4} < x^2 - 3x$	$\frac{-3 - \sqrt{10}}{4} < x < \frac{-3 + \sqrt{10}}{4}$
89	$\frac{7x + 6}{6} + \frac{(3 + 2x)^2}{3} < 3 + \frac{(x + 1)(x + 4)}{4}$	$-\frac{47}{13} < x < 0$
90	$\left(x - \frac{2}{3}\right)(1 - x) \leq \frac{2}{3} + 2(1 - x)$	$x \leq \frac{5}{3} \vee x \geq 2$
91	$\left(x - \frac{2}{3}\right)\left(x + \frac{2}{3}\right) - x^2 + x < -x + \frac{1}{2}x^2$	$x \leq \frac{6 - 2\sqrt{7}}{3} \vee x \geq \frac{6 + 2\sqrt{7}}{3}$
92	$\frac{(x - 2)(3 - x)}{8} \geq \frac{x - 1}{4} + \frac{3}{4}$	$\emptyset$
93	$(1 - x)(x - 2) \leq \frac{2}{3}(1 - x) + \frac{2}{3}$	$x \leq \frac{5}{3} \vee x \geq 2$
94	$\frac{1}{2}(3x - 1)(3x + 1) < \frac{x^2 - 2}{8} + 1$	$-\frac{\sqrt{14}}{7} < x < \frac{\sqrt{14}}{7}$
95	$(x + 5) \cdot \frac{2x + 13}{3} - (x + 6) \cdot \frac{x + 7}{12} < \frac{1}{6} + \frac{(x + 8)^2}{2}$	$-7 < x < 24$
96	$\frac{x + 1}{3} - \frac{1}{2} + \frac{3}{4}(x + 2)(x + 3) \geq x \cdot \frac{x + 4}{6}$	$x \leq -4 \vee x \geq -\frac{13}{7}$
97	$x^2 - \frac{3x + 1}{2} + (x + 1)^2 \geq 3(x^2 - 3) - 1 + 3(x - 2)$	$-\frac{11}{2} \leq x \leq 3$
98	$1 - \frac{(x + 1)(2x + 1)}{3} < \frac{(1 - 4x)(x + 2)}{2}$	$-2 < x < \frac{1}{8}$

99	$\frac{1}{4} - (x-2)^2 < \frac{x^2 - (x-1)^2}{4} - \frac{x^2}{8}$	$x \neq 2$
100	$\frac{x^3}{2} - \frac{7}{10} \leq \frac{(3x+4)(x-1)(x+3)}{6} + 1 - \frac{2}{5}(x+2)$	$x \leq -\frac{33}{50} \vee x \geq 1$
101	$(x^2+1)^2 - \frac{5}{2}x^2 - x + \frac{2}{3} \leq x^4 + 1$	$x \leq \frac{-3-\sqrt{21}}{3} \vee x \geq \frac{-3+\sqrt{21}}{3}$
102	$\frac{(4x-1)(x+2)}{2} - \frac{(x-2)(2x+1)}{3} \leq 2x$	$-2 \leq x \leq \frac{1}{8}$
103	$\frac{x}{3}(3x+1) + \frac{(1-x)(1+x)}{4} + \frac{(x+1)(x-3)}{12} > \frac{3+x}{3}$	$x < -1 \vee x > \frac{6}{5}$
104	$\frac{(x+1)(x-3)}{12} + \frac{x}{3}(3x+2) > \frac{3+2x}{3} + \frac{(x+1)(x-1)}{4}$	$x < -1 \vee x > \frac{6}{5}$
105	$\frac{2(2x-1)^2 - 3(x-1)}{12} + \frac{x^2+3+4x}{6} \geq 1$	$x \leq -\frac{1}{5} \vee x \geq \frac{1}{2}$
106	$12x^2 + \frac{x-1}{\frac{5}{4}} - \frac{5x-\frac{1}{3}}{2} + 3x > -\frac{1}{4}$	$x < -\frac{1}{24} \vee x > -\frac{1}{30}$
107	$\frac{5x-2}{\frac{1}{2}} - \frac{2x+1}{\frac{1}{5}} + 3x^2 > -x^2 + \frac{x+1}{\frac{2}{3}}$	$x < \frac{-13-7\sqrt{7}}{12} \vee x > \frac{-13+7\sqrt{7}}{12}$



risolvi le seguenti disequazioni di secondo grado frazionarie

108	$\frac{x^2 - 1}{x - 2} \geq 0$	$-1 \leq x \leq 1 \vee x > 2$
109	$\frac{x^2 - 4}{x - 1} \geq 0$	$-2 \leq x < 1 \vee x \geq 2$
110	$\frac{x - 2}{x^2 - 1} \leq 0$	$x < -1 \vee 1 < x \leq 2$
111	$\frac{x - 1}{x^2 - 4} \leq 0$	$x < -2 \vee 1 \leq x < 2$
112	$\frac{9 - x^2}{x^2 - 1} \geq 0$	$-3 \leq x < -1 \vee 1 < x \leq 3$
113	$\frac{x^2 - 1}{4 - x^2} \geq 0$	$-2 < x \leq -1 \vee 1 \leq x < 2$
114	$\frac{9 + x^2}{x^2 + 3x} \leq 0$	$-3 < x < 0$
115	$\frac{x^2 - 5x}{4 - x^2} \geq 0$	$-2 < x \leq 0 \vee 2 < x \leq 5$
116	$\frac{x^2 - 2x}{9 - x^2} \geq 0$	$-3 < x \leq 0 \vee 2 \leq x < 3$
117	$\frac{x^2 - 1}{-x^2 - 2} > 0$	$-1 < x < 1$
118	$\frac{x^2 - 4}{-x^2 - 3} > 0$	$-2 < x < 2$
119	$\frac{x^2 + 2}{x^2 - 4} < 1$	$-2 < x < 2$
120	$\frac{x^2 + 3}{x^2 - 9} < 1$	$-3 < x < 3$
121	$\frac{x^2 - x - 2}{x + 1} > 0$	$x > 2$

122	$\frac{-x^2 + 2x - 1}{2x + 6} \leq 0$	$x > -3$
123	$\frac{5x + 15}{-x^2 - 4x - 4} \leq 0$	$x > -3 \wedge x \neq -2$
124	$\frac{x^2 + 9}{x^2 - 3x + 12} < 0$	$\emptyset$
125	$\frac{-x^2 + 6x - 9}{x^2 + 4x + 3} \geq 0$	$-3 < x < -1 \vee x = 3$
126	$\frac{-x^2 + 3x}{x^2 + 2x - 15} \geq 0$	$-5 < x \leq 0$
127	$-\frac{x^2 + 2x + 5}{x^2 + 7} > 0$	$\emptyset$
128	$\frac{x^2 + x + 8}{x^2 + 2} > 0$	$R$
129	$\frac{x^2 - 8x + 16}{x^2 + 4x - 5} \geq 0$	$x < -5 \vee x > 1$
130	$\frac{4(x + 1) + x^2}{x^2 - 2x + 1} \leq 0$	$x = -2$
131	$\frac{3x^2 - 2(x - 4)}{x^2 - 81} \geq 0$	$x < -9 \vee x > 9$
132	$\frac{2(x^2 - 5x + 4)}{4x^2 - 8x + 16} < 0$	$1 < x < 4$
133	$\frac{3x^2 - 8x + 5}{x^2 - 2x + 3} \geq 0$	$x \leq 1 \vee x \geq \frac{5}{3}$
134	$\frac{x - 2x^2 + 10}{7 + x^2 + 8x} \leq 0$	$x < -7 \vee -2 \leq x < 1 \vee x \geq \frac{5}{2}$
135	$\frac{-x^2 + 9x - 14}{2x^2 - 5x - 3} < 0$	$x < -\frac{1}{2} \vee 2 < x < 3 \vee x > 7$

136	$\frac{2x^2 - x + 3}{-3x^2 + 16x - 5} > 0$	$\frac{1}{3} < x < 5$
137	$\frac{-9x^2 - 12x - 4}{2x^2 - 5x + 2} > 0$	$\frac{1}{2} < x < 2$
138	$\frac{x^2 - 5x + 6}{x^2 - 3x - 10} > 0$	$x < -2 \vee 2 < x < 3 \vee x > 5$
139	$\frac{x^2 - 5x + 12}{-x^2 + 4x - 4} > 0$	$\emptyset$
140	$\frac{x^2 - 3x + 2}{x^2 - 7x + 12} > 1$	$\frac{5}{2} < x < 3 \vee x > 4$
141	$\frac{3x^2 + 5x - 2}{3x^2 - x - 14} > \frac{1}{2}$	$x < -2 \vee -2 < x < -\frac{5}{3} \vee x > \frac{7}{3}$
142	$\frac{3(5x - 17)}{x^2 - 7x + 10} \geq 3$	$2 < x \leq 3 \vee 5 < x \leq 9$
143	$\frac{3(-x^2 - 7x + 14)}{x^2 - 7x + 12} \geq 3$	$-1 \leq x \leq 1 \vee 3 < x < 4$
144	$2 + \frac{5}{x-5} < -2 - \frac{3}{6x - x^2 - 5}$	$\frac{3}{4} < x < 1 \vee 4 < x < 5$
145	$\frac{1}{x-5} - \frac{2}{x+3} < \frac{1-2x}{x^2 - 2x - 15}$	$x < -12 \vee -3 < x < 5$
146	$\frac{x-4}{x-3} \leq \frac{5}{x^2 - 5x + 6} - \frac{1}{x-2}$	$0 \leq x < 2 \vee 3 < x \leq 5$
147	$\frac{x}{x+1} + \frac{15}{x^2 - 1} \geq 3 - \frac{18}{5(x-1)}$	$-\frac{27}{10} \leq x < -1 \vee 1 < x \leq 4$
148	$\frac{3(6 - x^2) - 14x}{x^2 - 5x + 6} \leq \frac{3x - 10}{x - 3} + \frac{1}{x - 2}$	$x \leq -\frac{1}{3} \vee \frac{1}{2} \leq x < 2 \vee x > 3$
149	$\frac{10 - 3x}{x - 3} - \frac{15}{x - 2} \leq \frac{3(x^2 + 1) + 21}{x^2 - 5x + 6}$	$x \leq -\frac{1}{3} \vee \frac{1}{2} \leq x < 2 \vee x > 3$

150	$\frac{x-5}{x^2-5x+6} \leq \frac{4}{x-3} - \frac{1+x}{x-2}$	$0 \leq x < 2 \vee 3 < x \leq 5$
151	$\frac{3x-1}{x(x-1)} - \frac{2}{x-1} \leq \frac{x+5}{x^2-x}$	$x < 0 \vee x > 1$