disequazioni polinomiali intere o frazionarie lineari e di grado superiore al primo

1	$\dfrac{x}{2} + \dfrac{x-1}{3} - 1 < 2x + \dfrac{7}{3}$	$x > -\dfrac{22}{7}$
2	$2x - \dfrac{1+3x}{2} - \dfrac{1}{2}(x-1) \le 3x - \dfrac{x+6}{4}$	$x \ge \dfrac{6}{11}$
3	$\dfrac{2-x}{12} - \dfrac{1+3x}{4} + \dfrac{1}{4} - \dfrac{2x-2}{3} > 3 - \dfrac{x}{2}$	$x < -\dfrac{13}{6}$
4	$x - \dfrac{1}{3}x + \dfrac{x+3}{6} - \dfrac{x-1}{4} < 6$	$x < 9$
5	$2\left[\dfrac{5-2x}{4} - 3(x-1)\right] - 4 \le \dfrac{5-7x}{2} + 3$	$x \ge -\dfrac{2}{7}$
6	$\dfrac{2x+3}{4} - 2x + \dfrac{3x+1}{3} \le 1 - \dfrac{x+2}{12}$	$x \ge \dfrac{3}{5}$
7	$\dfrac{x-\dfrac{1}{3}}{2} - \dfrac{2x-\dfrac{1}{2}}{6} \ge \dfrac{2}{3}\left(\dfrac{2}{3}x+2\right) + \dfrac{2x-1}{3}$	$x \le -\dfrac{39}{34}$
8	$\dfrac{2x-1}{3} + 2x - \dfrac{3}{2} > \dfrac{4x+1}{6} - 3\left(x+\dfrac{1}{2}\right)$	$x > \dfrac{1}{10}$
9	$\dfrac{2}{3}\left[3(x-2) + \dfrac{1-2x}{4} - \dfrac{1}{2}x\right] \le x + \dfrac{1}{2}$	$x \le 13$

Disequazioni algebriche di riepilogo

10	$\dfrac{1}{2} - \dfrac{1}{3}[x - 2(1-3x)] < \dfrac{x-1}{6} - \dfrac{x+1}{5}$	$x > \dfrac{2}{3}$
11	$2\left[\dfrac{x-1}{6} + 4\left(\dfrac{1-2x}{3} + \dfrac{x}{2}\right)\right] + 2 < \dfrac{x-2}{3}$	$x > \dfrac{15}{4}$
12	$\dfrac{5}{4} - \dfrac{2 - \frac{1}{2}x}{10} - \dfrac{3 - \frac{2}{3}x}{2} < 1 - \dfrac{\frac{1}{2} - 3x}{5}$	$x > -\dfrac{81}{13}$
13	$\dfrac{3}{2} - \dfrac{1-x}{2 - \frac{1}{2}} - \dfrac{3-x}{1 + \frac{1}{2}} < \dfrac{2}{3}(1 + 6x)$	$x > -\dfrac{11}{16}$
14	$\dfrac{3-x}{10} - \dfrac{3x-1}{2} < \dfrac{1}{5} - x$	$x > 1$
15	$\dfrac{x-1}{2} - \dfrac{\frac{2-x}{3}}{\frac{1}{3}} - \dfrac{1 - \frac{x}{2}}{2 - \frac{1}{2}} > \dfrac{2x-1}{\frac{1}{2} + \frac{1}{3}} - \dfrac{x - \frac{1}{4}}{\frac{3}{4}}$	$x > 3$
16	$\dfrac{3}{4}x - \dfrac{\left(\frac{1}{3} + 2^{-1}\right)x}{(1 - 2^{-1})^{-1}} < \dfrac{3}{4}x + \dfrac{1}{2}$	$x > -\dfrac{6}{5}$
17	$\dfrac{x}{1 + \sqrt{5}} < \dfrac{x-1}{1 - \sqrt{5}}$	$x < \dfrac{\sqrt{5}}{10} + \dfrac{1}{2}$
18	$\dfrac{x}{\sqrt{2}} + \dfrac{\sqrt{2}}{\sqrt{2} - 2} > x - \dfrac{1}{2 - \sqrt{2}}$	$x < -1 - \sqrt{2}$

19	$\dfrac{\sqrt{5}x + 1}{\sqrt{5} - 1} \geq \dfrac{2\sqrt{5} + x}{2\sqrt{5} + 1}$	$x \geq \dfrac{9 - 4\sqrt{5}}{11}$
20	$\dfrac{x - 1 + \sqrt{2}}{x\sqrt{2}} < \dfrac{1}{2}$	$-\sqrt{2} < x < 0$
21	$\dfrac{1 - x}{2 - x} > \dfrac{1}{\sqrt{3}}$	$x < \dfrac{1 - \sqrt{3}}{2} \ \lor \ x > 2$
22	$\dfrac{x^2}{4} - x < \dfrac{21}{4}$	$-3 < x < 7$
23	$\dfrac{2}{5}(x - 2)(x - 4) < \dfrac{x + 4}{2} - \dfrac{x^2}{4}$	$\dfrac{6}{13} < x < 4$
24	$\dfrac{x(x + 4)}{15} > 1 - \dfrac{x(x - 7)}{30}$	$x < -\dfrac{10}{3} \ \lor \ x > 3$
25	$(3x + 2)^2 \geq (3x - 2)^2$	$x \geq 0$
26	$4x^2 + 21 - x > 0$	R
27	$\dfrac{x - (1 + x^2)}{4} + 1 > \dfrac{2 - x^2}{2}$	$x < \dfrac{-\sqrt{5} - 1}{2} \ \lor \ x > \dfrac{\sqrt{5} - 1}{2}$

28	$\dfrac{x^2 - 2}{4} - \dfrac{x - 1 - \frac{1}{2}(2x - 1)(2x + 1)}{\frac{1}{2}} < \dfrac{4}{3}x^2 - \dfrac{2x - 1}{3}$	$\emptyset$
29	$x - \dfrac{1 + 2x}{3} - \dfrac{(2 + x)(2 - x)}{5} < \dfrac{4}{15} + \dfrac{2 + x^2}{5}$	$x < \dfrac{27}{5}$
30	$\dfrac{x^2 - 9}{6} + \dfrac{1 + x^2}{3} \geq \dfrac{1}{2}(x + 4 + 2x^2)$	$\emptyset$
31	$\dfrac{(2x - 3)(2x + 1)}{4} + \dfrac{7x}{12} < \dfrac{(x - 1)(x + 2)}{6} - \dfrac{9}{4}$	$\emptyset$
32	$\dfrac{23 + (x - 2)(x + 1)}{3} - 5 < \dfrac{(x - 1)(x + 2)}{2} + \dfrac{x - x^2}{4}$	$4 < x < 9$
33	$\dfrac{1}{9}\left[x(x - 1) - \dfrac{(2x - 1)^2 + 3}{4}\right] + \dfrac{1}{6}\left(x + \dfrac{1}{3}\right) \leq \dfrac{1}{4}(x + 1) + 2x - 1$	$x \geq \dfrac{1}{3}$
34	$\dfrac{(x + \sqrt{2})(\sqrt{2} - x)}{4} + \dfrac{x}{3} > \dfrac{2(x + 1) - 3(1 - 2x)}{6} - \dfrac{1}{4}x^2$	$x < \dfrac{2}{3}$
35	$(1 + 4x)[4x^2 - (1 - 2x)^2] + 3 < 2(x + 1) + 2x(3 - x)$	$0 < x < \dfrac{4}{9}$
36	$4x(x - 2) \leq 11 + (x - 4)^2$	$-3 \leq x \leq 3$

37	$(2x - 5)^6 \geq 0$	R
38	$3x^2 - 5x - 1 + 3(x - 1)(x + 1) \geq 0$	$x \leq -\dfrac{1}{2} \ \lor \ x \geq \dfrac{4}{3}$
39	$(x - 3)(x + 1)(2x + 3) > 0$	$-\dfrac{3}{2} < x < -1 \ \lor \ x > 3$
40	$(4 - x)^2(x + 5)(2x - 1) \geq 0$	$x \leq -5 \ \lor \ x \geq \dfrac{1}{2}$
41	$(1 - 3x)(1 + x^2 + 2x)(x - 2x^2) < 0$	$x < -1 \ \lor \ -1 < x < 0 \ \lor \ \dfrac{1}{3} < x < \dfrac{1}{2}$
42	$\dfrac{1}{x^2 + 2} \geq 0$	R
43	$\dfrac{2}{x^2 + 1} > 1$	$-1 < x < 1$
44	$\dfrac{2}{x - 1} + \dfrac{1}{x + 1} > -2$	$x < \dfrac{-3 - \sqrt{17}}{4} \ \lor \ -1 < x < \dfrac{-3 + \sqrt{17}}{4} \ \lor \ x > 1$
45	$(3x^2 - 4)\left(1 + \dfrac{1}{x - 1}\right) < 0$	$-\dfrac{2\sqrt{3}}{3} < x < 0 \ \ \lor \ \ 1 < x < \dfrac{2\sqrt{3}}{3}$
46	$1 + \dfrac{1}{3 - 2x} < \dfrac{1}{x + 1}$	$-1 < x < \dfrac{2 - \sqrt{6}}{2} \ \lor \ \dfrac{3}{2} < x < \dfrac{2 + \sqrt{6}}{2}$

47	$\dfrac{x}{x-1}+\dfrac{x-1}{x+1}<3-\dfrac{2}{x^2-1}$	$x<-3\ \vee\ -1<x<1\ \vee\ x>2$
48	$\dfrac{x+2}{2-x}<\dfrac{2x+1}{2x-1}$	$x<-1\ \vee\ \dfrac{1}{2}<x<1\ \vee\ x>2$
49	$\dfrac{1}{2}+\dfrac{(x+2)(x+1)}{x-1}-\dfrac{3x+1}{3}<0$	$-\dfrac{11}{25}<x<1$
50	$\dfrac{x^2-6x+9}{x^2(x^2+4x+4)}<0$	$\emptyset$
51	$\dfrac{(x-2)(5x+1)}{(x+1)}>0$	$-1<x<-\dfrac{1}{5}\ \vee\ x>2$
52	$\dfrac{(3-x)(4x-1)}{2x(4x-3)}>0$	$0<x<\dfrac{1}{4}\ \vee\ \dfrac{3}{4}<x<3$
53	$\dfrac{(4x-3)(2x-1)}{3x(6x-5)}<0$	$0<x<\dfrac{1}{2}\ \vee\ \dfrac{3}{4}<x<\dfrac{5}{6}$
54	$\dfrac{(x^2-4)(x+1)}{(2-3x)(1-3x)}\geq 0$	$-2\leq x<-1\vee\dfrac{1}{3}<x<\dfrac{2}{3}\vee x\geq 2$
55	$\dfrac{3x^2-75}{x(x+4)(x-1)}\leq 0$	$x\leq-5\ \vee\ -4<x<0\ \vee\ 1<x\leq 5$
56	$\dfrac{x^7(8-x)^9}{(x+2)^{11}}>0$	$x<-2\ \vee\ 0<x<8$

57	$\dfrac{14}{(2x-12)^{10}} < 0$	$\emptyset$
58	$-\dfrac{7}{(3x+6)^4} < 0$	$x \neq -2$
59	$\dfrac{18}{(5x+10)^7} < 0$	$x < -2$
60	$\dfrac{1}{(x-2)^3} < 1$	$x < 2 \ \lor \ x > 3$
61	$\dfrac{x^3 - 3x^2}{(x-1)^3} \geq 0$	$x < 1 \ \lor \ x \geq 3$
62	$\dfrac{x-1}{x^2 + 2x + 2} < 0$	$x < 1$
63	$\dfrac{4x^2 - 3x - 1}{x - 2} < 1$	$x < \dfrac{1}{2} \ \lor \ \dfrac{1}{2} < x < 2$
64	$\dfrac{6x^2 - 7x + 3}{2x(3x-1)} < 1$	$0 < x < \dfrac{1}{3} \ \lor \ x > \dfrac{3}{5}$
65	$\dfrac{3+2x}{2x-1} - \dfrac{10}{4x+2} > 1$	$x < -\dfrac{1}{2} \ \lor \ \dfrac{1}{2} < x < \dfrac{9}{2}$

66	$\dfrac{2-x}{1-x}+1 \geq \dfrac{x^2-3}{x^2-2x+1}$	$x < 1 \ \lor \ 1 < x \leq 2 \ \lor \ x \geq 3$
67	$1-\dfrac{2x}{x-3} > \dfrac{2(2x+7)}{(x-3)^2}$	$\emptyset$
68	$\dfrac{2x}{2x^2+7x+5} > \dfrac{x}{x^2+6x+5}$	$x < -5 \ \lor \ -\dfrac{5}{2} < x < -1 \ \lor \ x > 0$
69	$\dfrac{x+2}{x^2+2}+\dfrac{x-2}{x^3-2x^2+2x-4} > \dfrac{2}{x-2}$	$x < 2$
70	$\dfrac{2}{x^2+7x+12}-\dfrac{x+1}{x+3}-\dfrac{x-3}{x+4} \geq 0$	$-4 < x \leq -\dfrac{7}{2} \ \lor \ -3 < x \leq 1$
71	$\dfrac{x}{2x+1} < \dfrac{2-x^2}{4x^2+4x+1}+3$	$x \neq -\dfrac{1}{2}$
72	$\dfrac{x^2+x+1}{2x^2-5x+3}-\dfrac{x-3}{2x-3} > \dfrac{x+2}{x-1}$	$1-\sqrt{3} < x < 1 \ \lor \ \dfrac{3}{2} < x < 1+\sqrt{3}$
73	$\dfrac{x^2}{1+x-2x^2}+\dfrac{x-2}{x-1}-\dfrac{x+2}{2x+1} > 0$	$x < -\dfrac{1}{2} \ \lor \ 0 < x < 1$
74	$\dfrac{x+2}{2x+1}-\dfrac{x-1}{4x^2-1} \leq \dfrac{2}{2x-1}$	$\dfrac{1-\sqrt{7}}{2} \leq x < -\dfrac{1}{2} \ \lor \ \dfrac{1}{2} < x \leq \dfrac{1+\sqrt{7}}{2}$

Disequazioni algebriche di riepilogo

75	$\dfrac{x^2+2}{x^2-3} > -\dfrac{x^2-3}{x^2+3}$	$x < -\sqrt{3} \ \lor \ x > \sqrt{3}$
76	$(\sqrt{2}-1)x > \dfrac{2}{(1+\sqrt{2})x}$	$-\sqrt{2} < x < 0 \ \lor \ x > \sqrt{2}$
77	$\dfrac{x^2+1}{x^3-2x^2} - \dfrac{x+1}{x^2-2x} \ge \dfrac{2}{x-2}$	$x \le -1 \ \lor \ \dfrac{1}{2} \le x < 2$
78	$\dfrac{x^2-x-1}{x^3-27} - \dfrac{3}{x-3} < \dfrac{1+x}{x^2+3x+9}$	$x > 3$
79	$\dfrac{x-3}{x^2+3x+2} + \dfrac{x-2}{x^2+4x+3} \ge \dfrac{x^2-12}{x^3+6x^2+11x+6}$	$-3 < x < -2 \ \lor \ x \ge 1$
80	$\dfrac{x+1}{x^2+x-2} + \dfrac{x+2}{x^2-3x+2} > \dfrac{x^2-3}{x^4-2x^3-3x^2+8x-4}$	$-2 < x < -1 \ \lor \ x > 2$
81	$\dfrac{x^2-3x-4}{x^2+x-6} < \dfrac{2x-1}{x-2} - \dfrac{x+2}{x+3}$	$-3 < x < -\dfrac{5}{8} \ \lor \ x > 2$
82	$\dfrac{5}{x^4-2x^2+1} + \dfrac{3}{x^4-x^2} \ge 0$	$x < -1 \lor -1 < x \le -\frac{\sqrt{6}}{4} \lor \frac{\sqrt{6}}{4} \le x < 1 \lor x > 1$
83	$\dfrac{(x^3-27)(x^2-5x+6)(3x-x^2)}{(x^2+3)(x^3-6x^2+12x-8)} < 0$	$x < 0 \ \lor \ x > 3$

84	$$\frac{(x-5)^3(6x^3-5x^2)(4+x^6)(x^3-3x)^2(x^2-5x^3)}{(x^2-2x-8)(-3x+x^2)^2(-x+x^2+8)} > 0$$	$x < -2 \lor \frac{1}{5} < x < \frac{5}{6} \lor 4 < x < 5$
85	$$\frac{2(x-2)+4(1-x)-x+1}{2x+4(2-x)-3(4-x)} > 0$$	$\frac{1}{3} < x < 4$
86	$$\frac{(2x-3x^2)(x^3+8)(x^2-5x+6)}{(x^2-2x+1)(x^3+12x-8-6x^2)} < 0$$	$x < -2 \lor 0 < x < \frac{2}{3} \lor x > 3$

disequazioni in valore assoluto		
87	$\lvert -2+5x \rvert < 3$	$-\frac{1}{5} < x < 1$
88	$\lvert 3x-4 \rvert > 1$	$x < 1 \lor x > \frac{5}{3}$
89	$\lvert 5x-x^2 \rvert < 6$	$-1 < x < 2 \lor 3 < x < 6$
90	$\lvert x^2-2x-3 \rvert -2 > 0$	$x < 1-\sqrt{6} \lor 1-\sqrt{2} < x < 1+\sqrt{2} \lor x > 1+\sqrt{6}$
91	$\lvert x^2-25 \rvert \leq 0$	$x = \pm 5$

92	$|3 - 5x| > 3 - x^2$	$x < 0 \quad \lor \quad x > 1$
93	$|x^2 - 1| + x^2 > x$	$x \neq 1$
94	$3 - x^2 - |-x + x^2| > 0$	$-1 < x < \dfrac{3}{2}$
95	$2|x - 3| + 3x - 4 > 0$	$x > -2$
96	$|2x - 5x^2| < 2 + 3x^2$	$\dfrac{1 - \sqrt{5}}{2} < x < \dfrac{\sqrt{5} + 1}{2}$
97	$|x^2 - 4| + |3x| < 4$	$\emptyset$
98	$\dfrac{2}{|2x - 1|} < 3$	$x < \dfrac{1}{6} \quad \lor \quad x > \dfrac{5}{6}$
99	$\dfrac{3}{|2x + 1|} > 1$	$-2 < x < -\dfrac{1}{2} \lor -\dfrac{1}{2} < x < 1$

Disequazioni algebriche di riepilogo

100	$\left| 2x - \dfrac{x-1}{3} \right| < 2$	$-\dfrac{7}{5} < x < 1$
101	$\left| \dfrac{x}{2} - \dfrac{1}{3} \right| \leq 3$	$-\dfrac{16}{3} \leq x \leq \dfrac{20}{3}$
102	$\left| \dfrac{x-2}{2x} - \dfrac{1}{4} \right| > 2$	$-\dfrac{4}{7} < x < 0 \quad \vee \quad 0 < x < \dfrac{4}{9}$
103	$\left| \dfrac{x-4}{x+2} \right| > 2$	$-8 < x < -2 \quad \vee \quad -2 < x < 0$
104	$\left| \dfrac{x+3}{x} \right| - 1 \leq 0$	$x \leq -\dfrac{3}{2}$
105	$\left| \dfrac{2x-1}{x+1} - \dfrac{x-1}{2+2x} \right| < \dfrac{1}{2}$	$0 < x < 1$
106	$\left| \dfrac{2x-1}{4x-4} - \dfrac{3}{1-x} \right| > \dfrac{1}{2}$	$-\dfrac{9}{4} < x < 1 \quad \vee \quad x > 1$
107	$\dfrac{|x-2|}{|2x|} > 0$	$x \neq 0 \quad \wedge \quad x \neq 2$

Algebra

Disequazioni algebriche di riepilogo

108	$\left|\dfrac{|x|+1}{3-|x|}\right| > \dfrac{1}{3}$	$x \neq -3 \;\; \wedge \;\; x \neq 0 \;\; \wedge \;\; x \neq 3$
109	$\dfrac{|2x|-4}{|x|} < 4$	$x \neq 0$
110	$\dfrac{|x-2|-1}{2-|x|+|x-1|} < 2$	$-5 < x < 5$
111	$\dfrac{2|x|-1}{1-|-x|} > 0$	$-1 < x < -\dfrac{1}{2} \;\vee\; \dfrac{1}{2} < x < 1$
112	$|x-2|+|x+3|-2|x+1|-2x > 2$	$x < -3 \vee -3 < x < \dfrac{\sqrt{33}-5}{2} \vee x > 5$
113	$2|x-1|-|x-2|-|x+3|+2|x-4| > 0$	$x < \dfrac{5}{2} \;\vee\; x > \dfrac{11}{2}$
114	$\big|2x-|x-2|\big| < 1$	$\dfrac{1}{3} < x < 1$
115	$\big|x-3-|2x|\big| > 4$	$x < -\dfrac{1}{3} \;\vee\; x > 1$

116	$\dfrac{2x + |x - 1|}{2x - 2} < 1$	$x < 1$
117	$\left|\dfrac{2 + |x|}{3 + |x|}\right| > \dfrac{1}{4}$	R
118	$\left|\dfrac{x - |x - 1|}{x - 1}\right| < 1$	$0 < x < \dfrac{2}{3} \ \lor \ x > 2$
119	$\dfrac{|x - 1| - x + 3}{|x| + 2x - 4} > 0$	$x > \dfrac{4}{3}$

disequazioni irrazionali		
120	$\sqrt{x^2 - 7x + 10} < 5 + x$	$-\dfrac{15}{17} < x \leq 2 \ \lor \ x \geq 5$
121	$\sqrt{x^2 - 8x + 12} \leq x - 3$	$x \geq 6$
122	$x - 1 < \sqrt{2x^2 - x - 1}$	$x \leq -\dfrac{1}{2} \ \lor \ x > 1$
123	$\sqrt{x^2 + 2x + 5} < 3x - 1$	$x > \dfrac{\sqrt{3} + 1}{2}$

Disequazioni algebriche di riepilogo

124	$\dfrac{\sqrt{1-x^2}-3x+1}{x-1}>0$	$\dfrac{3}{5}<x<1$
125	$\dfrac{2x^2-3x+1}{\sqrt{3x^2-1}}>0$	$x<-\frac{\sqrt{3}}{3}\ \vee\ \frac{1}{2}<x<\frac{\sqrt{3}}{3}\ \vee\ x>1$
126	$\dfrac{2+x}{3-\sqrt{x^2+1}}>0$	$x<-2\sqrt{2}\ \vee\ -2<x<2\sqrt{2}$
127	$\sqrt{\dfrac{4-x^2}{3-x^2}}>2$	$-\sqrt{3}<x<-\frac{2\sqrt{6}}{3}\ \vee\ \frac{2\sqrt{6}}{3}<x<\sqrt{3}$
128	$\sqrt{\dfrac{x^2-1}{x^2-4}}>\sqrt{\dfrac{3}{x+2}}$	$x>2$
129	$\sqrt[3]{\dfrac{2x+7}{x+1}}>3$	$-1<x<-\dfrac{4}{5}$
130	$\sqrt[3]{\dfrac{x+1}{x^2+2}}<2$	R

131	$\sqrt[3]{\dfrac{3+x}{2-x^2}} < -1$	$\dfrac{1-\sqrt{21}}{2} < x < -\sqrt{2} \ \lor \ \sqrt{2} < x < \dfrac{1+\sqrt{21}}{2}$
132	$\sqrt[3]{\dfrac{x^4+x^3}{x-1}} - 1 - x > 0$	$-1 < x < \dfrac{1-\sqrt{5}}{2} \ \lor \ 1 < x < \dfrac{1+\sqrt{5}}{2}$
133	$\sqrt[3]{\dfrac{3-2x}{x-3}} < \sqrt[3]{2x}$	$\dfrac{2-\sqrt{10}}{2} < x < \dfrac{2+\sqrt{10}}{2} \ \lor \ x > 3$
134	$\dfrac{x^2-6x+5}{\sqrt{x+2}+3x-1} < 0$	$-2 \le x < \dfrac{7-\sqrt{85}}{18} \ \lor \ 1 < x < 5$
135	$\dfrac{5-2x+\sqrt{2x-1}}{\sqrt{x^2+2}-\sqrt{x+3}} > 0$	$\dfrac{1+\sqrt{5}}{2} < x < \dfrac{11+\sqrt{17}}{4}$
136	$\dfrac{\sqrt{9x^2+6x+1}-7}{x+1-\sqrt{x}} > 0$	$x > 2$
137	$\dfrac{x-2+\sqrt{2x^2+3}}{\sqrt{x^2-4}} < 0$	$-2-\sqrt{5} < x < -2$

	esercizi più impegnativi di vario tipo	
138	$\dfrac{1-4x+\sqrt{x^2+4}}{1-x+\sqrt{x^2+x+2}} < 0$	$x > \dfrac{\sqrt{61}+4}{15}$
139	$\dfrac{(x^2+5x)\left(2+x-\sqrt{3x^2+6x}\right)}{(-27+x^3)(2x-x^2)(x^2+3)} \geq 0$	$-5 \leq x \leq -2 \ \vee\ 1 \leq x < 2 \vee x > 3$
140	$\dfrac{\left(1-x+\sqrt{2x^2-x}\right)(x^2-9)(2-x^2+x)}{(x^3+64)(x^4-81)(x-2)} > 0$	$-4 < x < -3 \ \vee\ -3 < x < -1$
141	$\sqrt{|x^2-1|} < 2-x$	$x < \dfrac{5}{4}$
142	$\sqrt{2} < \sqrt{|3-2x|}$	$x < \dfrac{1}{2} \ \vee\ x > \dfrac{5}{2}$
143	$|1+3x| < \sqrt{1-2x}$	$-\dfrac{8}{9} < x < 0$
144	$\sqrt{3+x} < |1+x|$	$-3 \leq x < -2 \ \vee\ x > 1$
145	$\sqrt{|x^2-1|} < 1-x$	$x < 0$

146	$\left| \dfrac{2 - \sqrt{x}}{1 - |2x|} \right| > 1$	$0 \leq x < \dfrac{1}{2} \quad \vee \quad \dfrac{1}{2} < x < 1$
147	$\sqrt{\dfrac{3 - |3x - 1|}{1 + x}} > 1$	$x < -1 \quad \vee \quad -\dfrac{1}{2} < x < \dfrac{3}{4}$
148	$1 + \dfrac{|x|}{\sqrt{x}} > 0$	$x > 0$
149	$\sqrt{1 - 4x^2} > \sqrt{3 - |x|}$	$\emptyset$
150	$\dfrac{(|x| - 3)(\sqrt{x^2 - 2x} + 1)}{3 - 2x^2} \leq 0$	$x \leq -3 \ \vee \ -\dfrac{\sqrt{6}}{2} < x \leq 0 \ \vee \ x \geq 3$
151	$\dfrac{\sqrt[3]{1 - x^3} + x}{\left| \dfrac{x - 3}{x + 2} \right| - 2} > 0$	$-7 < x < -2 \quad \vee \quad -2 < x - \dfrac{1}{3}$
152	$\dfrac{|x - 1| + 2}{\sqrt{x^2 - 1} + 3x} \leq 0$	$x \leq -1$
153	$\dfrac{\left| \dfrac{x - 2}{1 - 3x} \right| - 2}{\sqrt{1 - x^2} - 2 + x} > 0$	$-1 \leq x < 0 \quad \vee \quad \dfrac{4}{7} < x \leq 1$

154	$\dfrac{\|x-1\|-\|x^2-3\|+2x-3}{\sqrt{x}-3+x}<0$	$\dfrac{-3+\sqrt{37}}{2}<x<\dfrac{7-\sqrt{13}}{2}$ $\lor$ $x>\dfrac{3+\sqrt{5}}{2}$
155	$\dfrac{\sqrt[3]{x^2-5x+5}+1}{\sqrt{\|x\|-2}+1}\geq 0$	$x\leq -2$ $\lor$ $x\geq 3$ $\lor$ $x=2$
156	$\dfrac{\|x-2x^2\|-2\|x+2\|}{\sqrt[3]{3x}-2}<0$	$x<\dfrac{3-\sqrt{41}}{4}$ $\lor$ $\dfrac{3+\sqrt{41}}{4}<x<\dfrac{8}{3}$
157	$\dfrac{\sqrt{x^2-4}-\|x\|+\dfrac{3}{2}}{\|x-3\|-x^2+\|x\|}>0$	$-3<x<-\dfrac{25}{12}$ $\lor$ $2\leq x<\dfrac{25}{12}$
158	$\sqrt{2x^2-4x}-\dfrac{\|x+1\|}{2}\geq 0$	$x\leq\dfrac{9-2\sqrt{22}}{7}$ $\lor$ $x\geq\dfrac{9+2\sqrt{22}}{7}$
159	$\dfrac{(3x^2-2)(\|2x^2-1\|+x)}{3\sqrt{x-1}-2}>0$	$x>\dfrac{13}{9}$
160	$\dfrac{2\sqrt{\|x-1\|-x}-4x}{\|\,\|x\|-1\,\|}>0$	$x<-1$ $\lor$ $-1<x<\dfrac{-1+\sqrt{5}}{4}$
161	$\left\|\dfrac{x-\|x\|}{\sqrt{x}+2}-1\right\|>1$	$\emptyset$

162	$\sqrt[3]{\dfrac{\lvert 3-2x\rvert - x}{1+3\sqrt{x}}} \le 0$		$1 \le x \le 3$
163	$\dfrac{2x^2-1}{\lvert x\rvert - 1} > \sqrt{x} + 1$	🏆	$x > 1$