

risolvi le seguenti disequazioni riconducibili al primo grado mediante scomposizione

1	$(x - 1)(x + 2)(3 - x) \leq 0$	$-2 \leq x \leq 1 \vee x \geq 3$
2	$-x(x + 1)(1 - x) < 0$	$x < -1 \vee 0 < x < 1$
3	$(x + 1)(x - 1) > 0$	$x < -1 \vee x > 1$
4	$(x + 3)(x - 5)(x + 1) > 0$	$-3 < x < -1 \vee x > 5$
5	$(x - 1)(x + 1) - (x - 3)^2 < 3$	$x < \frac{13}{6}$
6	$4(2x - 1) - x + (2x - 1)^2 > 4(x - 2)^2 - 12(x - 1)$	$x > 1$
7	$x^2 - 9 < (x - 3)(x + 3) + 2x$	$x > 0$
8	$(2x + 1)^2 \leq (2x + 1)(x - 2)$	$-3 \leq x \leq -\frac{1}{2}$
9	$(x + 2)(x - 3) < (x - 2)(x + 3)$	$x > 0$
10	$(x - 3)(x + 3) - (x - 1)^2 > 2x + 1$	\emptyset
11	$(1 - x)^3 + (1 + x)^3 < 6x^2 - x + 3$	$x < 1$
12	$(2y + 3)^2 - (2y + 1)^2 \geq (1 - y)^2 - y^2$	$y \geq -\frac{7}{10}$
13	$(x - 2)^8(x^2 + 1)^{10}(3 - x) \geq 0$	$x \leq 3$
14	$(x - 1)^3 - (x + 1)^3 + 6x\left(x - \frac{1}{2}\right) < (x - 1)^2 - (x + 1)^2$	$x < 2$
15	$x\left(\frac{5}{3}x - 2x\right) - \frac{1}{3} < -\frac{x}{3}(x + 2) - \frac{19}{6}$	$x < -\frac{17}{4}$

16	$(x-1)^3 - (x+1)^3 > 2x - 2 - 6x^2 + 2(x+1)(x-1) - 2(x-2)^2$	$x < 1$
17	$(x+3)^3 - 4[x+5 - (x+8)]^3 > (x-3)^2(x+3) + 12(x+1)^2$	$x > -8$
18	$\frac{1}{x} \leq 0$	$x < 0$
19	$\frac{x-2}{x+3} > 0$	$x < -3 \vee x > 2$
20	$\frac{x+3}{x-2} > 0$	$x < -3 \vee x > 2$
21	$-\frac{2x+3}{5x+1} \geq 0$	$-\frac{3}{2} \leq x < -\frac{1}{5}$
22	$\frac{2x-1}{x-3} > 0$	$x < \frac{1}{2} \vee x > 3$
23	$\frac{5-x}{2x+2} < 0$	$x < -1 \vee x > 5$
24	$\frac{x-2}{x-16} < 0$	$2 < x < 16$
25	$\frac{2x-1}{5-x} \leq 0$	$x \leq \frac{1}{2} \vee x > 5$
26	$\frac{3x+7}{4x-1} \geq 0$	$x \leq -\frac{7}{3} \vee x > \frac{1}{4}$
27	$\frac{3-x}{2-7x} \geq 0$	$x < \frac{2}{7} \vee x \geq 3$
28	$\frac{x+5}{x-2} \leq 0$	$-5 \leq x < 2$
29	$\frac{2+x}{x-1} < 0$	$-2 < x < 1$

30	$\frac{1-3x}{4x-3} < 0$	$x < \frac{1}{3} \vee x > \frac{3}{4}$
31	$\frac{2-x}{4+x} \geq 0$	$-4 < x \leq 2$
32	$\frac{22-x}{1-x} - 7 \geq 0$	$-\frac{5}{2} \leq x < 1$
33	$\frac{1-x}{3x} - 1 \geq 0$	$0 < x \leq \frac{1}{4}$
34	$\frac{2x-5}{4x+1} < 0$	$-\frac{1}{4} < x < \frac{5}{2}$
35	$\frac{2x}{x+1} \leq 0$	$-1 < x \leq 0$
36	$\frac{x-2}{x-16} < 0$	$2 < x < 16$
37	$\frac{3x+6}{2x-8} > 0$	$x < -2 \vee x > 4$
38	$\frac{3x+2}{4x+6} > 0$	$x < -\frac{3}{2} \vee x > -\frac{2}{3}$
39	$\frac{7x-2}{8-4x} < 0$	$x < \frac{2}{7} \vee x > 2$
40	$\frac{7}{x-5} < 0$	$x < 5$
41	$\frac{15}{7+x} - 15 \geq 0$	$-7 < x \leq -6$
42	$\frac{1-x}{2x} \geq 0$	$0 < x \leq 1$
43	$\frac{3x-6}{2x+1} \geq 0$	$x < -\frac{1}{2} \vee x \geq 2$

44	$\frac{37 - 25x}{4x - 5} > 0$	$\frac{5}{4} < x < \frac{37}{25}$
45	$\frac{2x}{x + 1} \leq 0$	$-1 < x \leq 0$
46	$\frac{2x - 5}{4x + 1} \leq 0$	$-\frac{1}{4} < x \leq \frac{5}{2}$
47	$\frac{x - 5}{x + 3} \leq 0$	$-3 < x \leq 5$
48	$\frac{4 + 10x}{4 - 3x} < 0$	$x < -\frac{2}{5} \vee x > \frac{4}{3}$
49	$\frac{2 - x}{x + 4} \geq 0$	$-4 < x \leq 2$
50	$\frac{3x - 15}{2x + 4} > 0$	$x < -2 \vee x > 5$
51	$2 - \frac{x - 12}{3x + 1} \leq 0$	$-\frac{14}{5} \leq x < -\frac{1}{3}$
52	$2 - \frac{5}{x - 10} < 0$	$10 < x < \frac{25}{2}$
53	$\frac{6}{x - 3} - \frac{5}{2} > 0$	$3 < x < \frac{27}{5}$
54	$5 - \frac{1 + 2x}{2x - 1} \geq 0$	$x < \frac{1}{2} \vee x \geq \frac{3}{4}$
55	$\frac{2}{3} - \frac{10}{3 - x} > 0$	$x < -12 \vee x > 3$
56	$\frac{1 - x}{3x} - 1 \geq 0$	$0 < x \leq \frac{1}{4}$
57	$\frac{\frac{5}{3x - 2}}{\frac{7}{x - 2}} < 0$	$\frac{2}{3} < x < 2$

58	$\frac{x^2 - x}{x + 1} > 0$	$-1 < x < 0 \vee x > 1$
59	$\frac{x^2 + x}{3x - 1} > 0$	$-1 < x < 0 \vee x > \frac{1}{3}$
60	$\frac{(4 - x)(x + 2)}{3x - 1} < 0$	$-2 < x < \frac{1}{3} \vee x > 4$
61	$\frac{2}{(x + 5)^3} > 0$	$x > -5$
62	$-\frac{3}{(2 - 3x)^5} > 0$	$x > \frac{2}{3}$
63	$\frac{8}{(12x - 6)^4} > 0$	$x \neq \frac{1}{2}$
64	$\frac{(x - 3)(2x - 5)}{(4 - 3x)(3x - 8)} \leq 0$	$x < \frac{4}{3} \vee \frac{5}{2} \leq x < \frac{8}{3} \vee x \geq 3$
65	$\frac{-2x(x - 1)^2}{(x + 3)^3(2 - x)} \geq 0$	$-3 < x \leq 0 \vee x = 1 \vee x > 2$
66	$\frac{x^2(2x + 1)^5}{(x - 3)^9(x^2 + 4)} \leq 0$	$-\frac{1}{2} \leq x < 3$
67	$-\frac{x^2}{(1 - x)^5} < 0$	$x < 0 \vee 0 < x < 1$
68	$\frac{(x - 7)(x + 1)}{x^2(x - 5)^4} < 0$	$-1 < x < 0 \vee 0 < x < 5 \vee 5 < x < 7$
69	$\frac{(4x + 9)^4(2x - 7)^6}{(x - 20)^2} \geq 0$	$x \neq 20$
70	$\frac{x^3 + x^2}{(1 - x)(x + 3)(2 - x)} \leq 0$	$-3 < x \leq -1 \vee x = 0 \vee 1 < x < 2$
71	$\frac{3x - 6}{x(x + 1)} > 0$	$-1 < x < 0 \vee x > 2$

72	$\frac{(x+1)(x-3)}{1-2x} > 0$	$x < -1 \vee \frac{1}{2} < x < 3$
73	$\frac{(2-x)(3-x)}{x} < 0$	$x < 0 \vee 2 < x < 3$
74	$\frac{7}{x-7} - \frac{3}{x-3} \leq 0$	$x \leq 0 \vee 3 < x < 7$
75	$\frac{3x-1}{3-2x} + \frac{x+2}{2x-3} \geq 0$	\emptyset
76	$\frac{1}{x-1} \leq 3$	$x < 1 \vee x \geq \frac{4}{3}$
77	$\frac{x-2}{2x-3} \geq 2$	$\frac{4}{3} \leq x < \frac{3}{2}$
78	$\frac{x}{x-2} > 5$	$2 < x < \frac{5}{2}$
79	$\frac{3x}{x-6} \geq 8$	$6 < x \leq \frac{48}{5}$
80	$\frac{x+4}{x-3} < 2$	$x < 3 \vee x > 10$
81	$\frac{x+3}{x-2} < 1$	$x < 2$
82	$\frac{2x-1}{x-3} > 2$	$x > 3$
83	$\frac{5x+12}{7x-1} < 1$	$x < \frac{1}{7} \vee x > \frac{13}{2}$
84	$\frac{2-3x}{x+2} < \frac{2}{3}$	$x < -2 \vee x > \frac{2}{11}$
85	$\frac{x-2}{2x-1} > 2$	$0 < x < \frac{1}{2}$

86	$\frac{2x + 5}{3x - 1} > 4$	$\frac{1}{3} < x < \frac{9}{10}$
87	$\frac{7x - 5}{8x + 3} > 4$	$-\frac{17}{25} < x < -\frac{3}{8}$
88	$\frac{2x}{1 + x} > -3$	$x < -1 \vee x > -\frac{3}{5}$
89	$\frac{16}{2x - 5} > 3$	$\frac{5}{2} < x < \frac{31}{6}$
90	$\frac{2x - 3}{x - 5} > 2$	$x > 5$
91	$\frac{3x - 2}{5 - 3x} \geq 1$	$\frac{7}{6} \leq x < \frac{5}{3}$
92	$\frac{2x + 1}{3x - 4} < 2$	$x < \frac{4}{3} \vee x > \frac{9}{4}$
93	$5 < \frac{1 + 2x}{2x - 1}$	$\frac{1}{2} < x < \frac{3}{4}$
94	$\frac{x - 1}{x + 1} - 1 < \frac{1 - 3x}{1 + x}$	$-1 < x < 1$
95	$\frac{15}{7} \leq -\frac{1}{x + 6}$	$-\frac{97}{15} \leq x < -6$
96	$\frac{2}{6x - 7} - \frac{1}{4} \geq 1$	$\frac{7}{6} < x \leq \frac{43}{30}$
97	$8 \geq \frac{11}{x} - \frac{1}{4}$	$x < 0 \vee x \geq \frac{4}{3}$
98	$\frac{3(4 + 5x)}{x} \geq -\frac{5}{4}$	$x \leq -\frac{48}{65} \vee x > 0$
99	$-3 + \frac{1 - x}{9} \geq \frac{x}{3}$	$x \leq -\frac{13}{2}$

100	$-3 > \frac{3}{x-6} + \frac{1}{5}$	$\frac{81}{16} < x < 6$
101	$\frac{2}{3x-3} < \frac{4}{3-x}$	$x < 1 \vee \frac{9}{7} < x < 3$
102	$\frac{x-2}{3x-5} > \frac{6}{19}$	$x < \frac{5}{3} \vee x > 8$
103	$\frac{13}{x+4} \leq \frac{15}{2x-3}$	$x < -4 \vee \frac{3}{2} < x \leq 9$
104	$\frac{4}{7x-3} < \frac{3}{3-2x}$	$x < \frac{3}{7} \vee \frac{21}{29} < x < \frac{3}{2}$
105	$\frac{6}{2x-1} > \frac{5}{x-2}$	$x < -\frac{7}{4} \vee \frac{1}{2} < x < 2$
106	$\frac{3}{4-x} < \frac{6}{4x-3}$	$\frac{3}{4} < x < \frac{11}{6} \vee x > 4$
107	$\frac{6}{2x+1} < \frac{5}{2-3x}$	$x < -\frac{1}{2} \vee \frac{1}{4} < x < \frac{2}{3}$
108	$\frac{7}{3x-1} < \frac{12}{5x+6}$	$-\frac{6}{5} < x < \frac{1}{3} \vee x > 54$
109	$\frac{8}{2x+5} \geq \frac{7}{3x-2}$	$-\frac{5}{2} < x < \frac{2}{3} \vee x \geq \frac{51}{10}$
110	$\frac{x-4}{3} - \frac{3}{x-4} \geq \frac{1}{3}x$	$\frac{7}{4} \leq x < 4$
111	$\frac{1}{2x-1} > -\frac{1}{3}$	$x < -1 \vee x > \frac{1}{2}$
112	$\frac{3}{8} < -\frac{5}{2x-4}$	$-\frac{14}{3} < x < 2$
113	$\frac{2}{4x+1} > -\frac{3}{2}$	$x < -\frac{7}{12} \vee x > -\frac{1}{4}$

114	$-\frac{5}{3} > \frac{4}{\frac{3}{2} - x}$	$\frac{3}{2} < x < \frac{39}{10}$
115	$\frac{\frac{3}{4}}{x-5} \geq \frac{1}{3}$	$5 < x \leq \frac{29}{4}$
116	$\frac{5x-1}{x+4} - 3 < \frac{1-2x}{4+x}$	$-4 < x < \frac{7}{2}$
117	$\frac{x}{4(1+x)} - \frac{1}{4} > \frac{3}{x}$	$x < -1 \vee -\frac{12}{13} < x < 0$
118	$\frac{x}{x-2} + \frac{2+3x}{x+1} > 4$	$-4 < x < -1 \vee x > 2$
119	$\frac{1-x}{x+2} \leq \frac{2}{x-1}$	$x < -2 \vee x > 1$
120	$\frac{x-2}{3x-5} \geq \frac{6}{17}$	$-4 \leq x < \frac{5}{3}$
121	$\frac{1}{x} > \frac{1}{4-x}$	$0 < x < 2 \vee x > 4$
122	$\frac{x-2}{x-3} > \frac{x-5}{x+2}$	$-2 < x < \frac{19}{8} \vee x > 3$
123	$\frac{x^2-1}{x+3} > \frac{3}{x+3}$	$-3 < x < -2 \vee x > 2$
124	$\frac{x+3}{x+5} - 1 > \frac{2x-1}{x+5}$	$-5 < x < -\frac{1}{2}$
125	$\frac{x^2+3}{3-x} > \frac{4}{3-x}$	$x < -1 \vee 1 < x < 3$
126	$\frac{2x+3}{4-x^2} - 1 > \frac{1-x}{2+x}$	$x < -2 \vee \frac{3}{5} < x < 2$
127	$\frac{x-1}{x+3} < \frac{2}{x-2} + 1$	$-3 < x < \frac{1}{3} \vee x > 2$

128	$\frac{1-2x}{x-3} - 2 < \frac{5-4x}{x-1}$	$1 < x < \frac{4}{3} \vee x > 3$
129	$\frac{x}{x-2} + \frac{2+3x}{x+1} > 4$	$-4 < x < -1 \vee x > 2$
130	$\frac{x-2}{x+5} > \frac{3}{x-2} + 1$	$x < -5 \vee -\frac{1}{10} < x < 2$
131	$\frac{x-1}{x-2} \geq \frac{3}{4-2x}$	$x \leq -\frac{1}{2} \vee x > 2$
132	$\frac{32x-1}{26-x} \geq \frac{3}{2(x-6)}$	$0 \leq x < 6$
133	$\frac{x-2}{x+5} > \frac{3}{x-2} + 1$	$x < -5 \vee -\frac{1}{10} < x < 2$
134	$1 + \frac{x+1}{x} \leq \frac{6}{x+1}$	$-1 < x < 0 \vee \frac{1}{2} \leq x \leq 1$
135	$\frac{x-1}{x} + \frac{x+1}{x-1} < 3 - \frac{2}{x(x-1)}$	$x < -1 \vee 0 < x < 1 \vee x > 3$
136	$\frac{2x}{x+2} < 2 \left(1 - \frac{x+2}{4x} \right)$	$-2 < x < 0$
137	$\frac{1-4x+3x^2}{(x-2)(x-3)} < 3$	$x < \frac{17}{11} \vee 2 < x < 3$
138	$\frac{6x+6}{(3-x)(3+x)} + \frac{2}{x+3} > \frac{3}{3-x}$	$x < 3 \wedge x \neq -3$
139	$\frac{(x-1)^3 + 2}{(x+1)^3} > 1$	$x < -1$
140	$\frac{2x-3}{x^2-25} > \frac{1}{x-5} + \frac{1}{x+5}$	$-5 < x < 5$
141	$\frac{1-4x+3x^2}{(x+2)(x-3)} < 3$	$-2 < x < 3 \vee x > 19$