Equazioni lineari numeriche

indice

Gli esercizi sono proposti in ordine di difficoltà crescente.
nota: in un file così lungo e complesso può accadere che sia presente un errore di diversa natura nonostante gli esercizi siano stati controllati più volte.
Saremo grati di ricevere segnalazioni di eventuali refusi o suggerimenti di qualsiasi natura.

Equazioni di primo grado numeriche intere

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1. equazioni lineari intere

1	$2x - 3 = -5$	-1
2	$6x - 26 = 16x - 56$	3
3	$8x - 9x = 6x + 12 - 12x$	$\frac{12}{5}$
4	$3x - 2 = 4x + 6$	-8
5	$-x + 4 = 7x$	$\frac{1}{2}$
6	$-2x + 5 = 6 - 3x$	1
7	$-8x + 5 = 5 - 8x$	$indeterminata$
8	$3x - 15 = 2x - 20$	-5
9	$3(7x - 5) = 15x - 1$	$\frac{7}{3}$
10	$4(3x - 1) = 4x - 2$	$\frac{1}{4}$
11	$3(3x - 1) + x = 1 - 5x$	$\frac{4}{15}$
12	$40 + x = 3(15 + x)$	$-\frac{5}{2}$
13	$2(x - 4) = 3(x - 5)$	7
14	$5x - 3 = 2(x - 1) + 5$	2
15	$x - 3(x + 1) = 5x - 4(x - 1)$	$-\frac{7}{3}$

Equazioni di primo grado numeriche intere

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16	$5x + 2(x + 1) - 3x = 4x - 3 + x$	5
17	$3x - 5 + 2(x - 3) = 1 + 5x$	*impossibile*
18	$2(5 + x) = 5x + 1$	3
19	$3(3 + x) - x = 5x + 14$	$-\frac{5}{3}$
20	$4(x - 3) - 3(x - 5) = 3(x + 1)$	0
21	$8(x + 3) = 8x - 24$	*impossibile*
22	$6(x + 3) - 3(x + 6) = 2(x - 5)$	-10
23	$4(2x - 3) - 5(3x - 2) = 8(1 - x)$	10
24	$7(x - 18) = 3(x - 14) - 20$	16
25	$3(x - 2) - 40 = 9 + 7(x - 9)$	2
26	$5(2x - 10) + 26 = 2(x + 3) + 10$	5
27	$(x - 3)(x - 2) = x(x - 6)$	-6
28	$3(3 - 2x) = 24 + 4(2x - 1)$	$-\frac{11}{14}$
29	$2(x + 1) - 3x = x - 3(x - 1)$	1
30	$4(1 - 2x) - 2x + 4 = 2(3x - 1) + 4$	$\frac{3}{8}$
31	$3(x + 2) + 4(x + 3) = 2x - 9(x - 1) + x$	$-\frac{9}{13}$

32	$2(x+1)-3(x+2)=4x-2(x+1)$	$-\frac{2}{3}$
33	$3(1-x)+5(1-x)=3(x-1)+1$	$\frac{10}{11}$
34	$3(1-x)+2(3-2x)=4(1-x)+3(x-2)$	$\frac{11}{6}$
35	$3(x-1)-2x+5=4(x-2)+4$	2
36	$3(2x+1)=3+6x$	*indeterminata*
37	$2+x+2(60x+30x)=542+x$	3
38	$2x+5(x-6)=x+6(x+1)$	*impossibile*
39	$5(2+x)=3(1+x)-2x-4(2-x)$	*impossibile*
40	$(7-3x)2+x=5-3(5-x)$	3
41	$2(x-3)-4(1-2x)=3(x-1)$	1
42	$(x+2)^2=x^2$	-1
43	$x(x+6)+x+9=x+(x+3)^2$	*indeterminata*
44	$(x-6)(x+6)=(x-6)^2$	6
45	$(x-1)^2=x(x-2)$	*impossibile*
46	$(2x-3)^2-(2x+1)(2x-1)=10-12x$	*indeterminata*
47	$(x+1)^2=x^2+1$	0

48	$x(x^2-2)-(x+1)^3=3x-(3x^2+2)$	$\frac{1}{8}$
49	$5x-(x-2)^2-3(2x+5)=4-(x-1)(x+1)-3$	7
50	$x-1+5(x-3)+(-2)^2=6x-2$	*impossibile*
51	$(2x+3)(x-2)+(x-2)(x-3)=3x(x-3)$	0
52	$(1-3x)(1+3x)-2(x-5)=3-9x^2$	4
53	$(3x-4)^2-3x(3x-5)+2=0$	2
54	$(5x-1)^2-7x(3x-2)=(2x-3)^2$	$\frac{1}{2}$
55	$(x-2)^2=(x-1)^2+5$	-1
56	$(3x-2)^2+2x-1=(2x+1)^2+5x(x-2)-3$	$\frac{5}{4}$
57	$(x-2)^3+3x(2+x)=(x-1)^3+2$	$\frac{3}{5}$
58	$(3x-4)^3-2(3x-1)^2(x-8)-3x^2(3x+16)=0$	$\frac{24}{23}$
59	$4(x-3)(x+3)-1=4x^2-2x$	$\frac{37}{2}$
60	$1-[2-3(x+1)]=2(2+x)-4x$	$\frac{2}{5}$
61	$[(x-1)(x+1)]^2=(x^2+1)^2-2(2x^2+1)-2x$	-1

62	$2(x-1)(x+1)+(2-x)^3=(4x-2)(1+2x)-x^3+8-12x$	*indeterminata*
63	$8-3[2x-3(x-2)+5]-2(4x-5)=0$	-3
64	$5-[-(x-1)-5(2x-1)]=2+x+(2x-3)$	0
65	$2-\{2x-3(2x-1)-5[2x-(3x+1)+3]\}=0$	9
66	$2x-[x-1-(2x+1)-3]=x+1$	-2
67	$[(x-6)-3-2x-(x-5)]+2(5x+4)=-2x$	$-\frac{2}{5}$
68	$8-(1+2x)-\{1-2[3(x-5)]-5x+4(2x+2)-1\}=0$	31

2. equazioni lineari intere con frazioni numeriche

69	$\frac{1}{5}x-9=2x$	-5
70	$\frac{1}{2}x-1=0$	2
71	$\frac{1}{4}x+3=x-6$	12
72	$\frac{1}{2}x-1=\frac{1}{3}x+2$	18
73	$\frac{2x+5}{3}-\frac{x+10}{6}=0$	0
74	$\frac{x+1}{3}=2x-3$	2

Equazioni di primo grado numeriche intere

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75	$\frac{7}{3}+\frac{2-x}{6}=\frac{1+2x}{6}-\frac{1-x}{2}$	3
76	$\frac{5-3x}{4}+\frac{5}{3}x=\frac{3}{2}-\frac{3-5x}{3}$	1
77	$\frac{1}{3}x+\frac{1}{2}=\frac{1}{4}x+\frac{1}{3}$	-2
78	$\frac{x+1}{4}+\frac{5-4x}{6}=\frac{1}{4}-\frac{1}{2}x+3$	26
79	$x+2-\frac{1}{4}x=\frac{2x-5}{3}+\frac{x+10}{2}-1$	$-\frac{4}{5}$
80	$\frac{2x+1}{6}+\frac{2x-4}{5}-6=\frac{20-x}{4}+\frac{1}{6}$	12
81	$\frac{x+2}{3}+\frac{5-2x}{5}+1=\frac{2x-5}{15}+\frac{2x+7}{3}-x$	-5
82	$\frac{x-4}{2}-\frac{x-3}{4}=1+\frac{x-2}{8}$	16
83	$x-\frac{x+3}{2}-3=\frac{1-x}{3}+1$	7
84	$\frac{3x+5}{9}-\frac{2x+3}{6}-\frac{1-2x}{2}=0$	$\frac{4}{9}$
85	$\frac{x}{2}+\frac{x+1}{7}=x-2$	6
86	$\frac{x+1}{10}-\frac{2x+1}{5}=\frac{2x-1}{5}-\frac{x-1}{2}+1$	-7
87	$\frac{x+1}{2}-\frac{3}{4}x=\frac{4-3x}{5}+\frac{3}{4}$	3

Equazioni di primo grado numeriche intere

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88	$\frac{1-3x}{2}+\frac{1}{3}x=\frac{x-1}{6}+\frac{1}{4}$	$\frac{5}{16}$
89	$\frac{x+2}{8}-\frac{2x-3}{12}+\frac{1+x}{24}=\frac{5-x}{12}-\frac{5}{4}$	$-\frac{33}{2}$
90	$\frac{x+2}{2}-\frac{x-3}{6}+\frac{3-x}{12}=\frac{10-x}{6}-\frac{5}{3}-x+1$	$-\frac{9}{17}$
91	$\frac{2x-1}{2}-5=2x-9-\frac{1-2x}{2}$	2
92	$\frac{3x-6}{2}-\frac{5x-7}{9}=\frac{4x-5}{3}-\frac{x+3}{4}-\frac{1}{2}$	5
93	$\frac{4x+1}{6}+\frac{1}{3}=\frac{2x-1}{3}$	*impossibile*
94	$7x-\frac{2}{5}+x-3=x-3+7x-\frac{2}{5}$	*indeterminata*
95	$\frac{x+1}{2}-\frac{x-1}{4}+\frac{3x-1}{4}=\frac{2x-1}{2}$	*impossibile*
96	$\frac{7-5x}{2}-2x=-\frac{14x-11}{3}-\frac{1-x}{6}$	*indeterminata*
97	$\frac{4+5x}{2}-\frac{5}{6}+\frac{8-12x}{11}=\frac{6-7x}{3}-\frac{12x-8}{11}$	$\frac{5}{29}$
98	$\frac{6-2x}{5}+\frac{2-5x}{-5}=\frac{3x-5}{10}-\frac{x+4}{-3}$	-1
99	$\frac{1}{4}(2x-1)=\frac{35}{4}-x$	6
100	$\frac{5(3x+8)}{3}-\frac{3(5x+8)}{5}=8$	$-\frac{4}{15}$

Equazioni di primo grado numeriche intere

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101	$-\frac{x-2}{4}+\frac{x-2}{3}+\frac{1}{3}(x-2)=\frac{x-1}{2}-\frac{1}{4}$	-1
102	$2-\frac{1}{2}x+3(x-2)=\frac{1}{4}+3x-1$	$-\frac{13}{2}$
103	$x-\frac{2}{3}+\frac{1}{9}(x-2)+\frac{1}{3}(x+2)=\left(x-\frac{2}{3}\right)+3x-1$	$\frac{13}{23}$
104	$\frac{1}{4}(5x-3)+\frac{6-x}{8}=0$	0
105	$\frac{2x-1}{2}:\frac{3}{4}-\left(2x-\frac{1}{3}\right):\frac{4}{5}=\frac{1}{12}-\frac{5}{4}x$	4
106	$\frac{x-2}{6}=\frac{x-2}{2}-\frac{x-2}{3}$	*indeterminata*
107	$\frac{5}{2}-\frac{3}{4}\left(\frac{1}{3}-\frac{x}{2}\right)-\left(\frac{2x-5}{6}-1\right)=1$	-74
108	$\frac{x}{60}+\frac{2}{15}(3x-1)+\frac{2x-1}{10}=\frac{3x+1}{3}-9$	22
109	$\frac{(x-2)(x+2)}{4}-\frac{3x^2-2x}{12}+\frac{1-2x}{3}=-\frac{1-x}{2}-\frac{5}{4}$	$\frac{13}{12}$
110	$2\left(\frac{3x-2}{4}-\frac{x-1}{4}-\frac{x}{2}\right)=x-3-\frac{5+x}{2}+\left(5-\frac{x}{2}\right)$	*indeterminata*
111	$\frac{1}{3}\left(\frac{2}{5}-\frac{1}{3}x\right)=\frac{x}{6}-\frac{2x-1}{6}$	$\frac{3}{5}$
112	$\frac{x-1}{2}+\frac{1}{16}x-2=\frac{x}{2}-\frac{1}{4}+\frac{3(3x-1)}{8}$	$-\frac{30}{17}$
113	$\frac{1}{4}x-\frac{5(x+2)}{12}-\frac{2x+1}{2}+\frac{2(3x-1)}{3}=0$	$\frac{12}{5}$

Equazioni di primo grado numeriche intere

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114	$\frac{2x-3}{2}-\frac{1}{2}-2=3x-5-(2-x)-3x$	*impossibile*
115	$\frac{x+2}{3}-\frac{x-1}{2}+2=\frac{19-x}{6}$	*indeterminata*
116	$\frac{4x+3}{7}-\frac{2(x+2)}{2}=\frac{6x-5}{14}-(x-1)$	$\frac{31}{2}$
117	$\frac{x^2+2x}{2}-\frac{1}{2}(3x+1)=\frac{1}{4}(1-x)(2x+1)+x(x-1)$	3
118	$\left(\frac{x-2}{2}\right)^2-\frac{x(x+8)}{4}=\frac{4-x}{3}$	$-\frac{1}{8}$
119	$\frac{(x+2)^2}{12}+\frac{(x-4)(x-6)}{8}=\frac{(5x-2)(x-8)}{24}+\frac{28}{3}$	8
120	$(2x-1)^2=\left(2x+\frac{1}{2}\right)\left(2x-\frac{1}{2}\right)$	$\frac{5}{16}$
121	$4x(x+1)+\left(\frac{1}{2}-x\right)\left(x+\frac{1}{2}\right)=(2x+1)^2-x(x+1)$	$\frac{3}{4}$
122	$(x+2)^2-\frac{3x-5}{2}=(x-3)^2-\frac{6-x}{2}+\frac{3-x}{4}+5$	$\frac{7}{11}$
123	$\frac{1}{4}(3x-2)+\frac{1}{3}(2x-1)=\frac{1}{4}(5x+6)+\frac{1}{3}(4x+5)$	$-\frac{24}{7}$
124	$\frac{2(x-3)}{5}+\frac{1}{10}(5-x)=6-\frac{3-2x}{2}$	$-\frac{52}{7}$
125	$\frac{3}{2}\left(\frac{7}{6}-x\right)-2\left(x-\frac{2}{3}\right)=\frac{3}{2}\left(\frac{1}{2}-x\right)+\frac{4}{3}-1$	1
126	$x-\frac{4(4-x)}{9}=1-2\left(x+\frac{1}{2}\right)+\frac{1}{3}(2x+3)$	1

Equazioni di primo grado numeriche intere

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127	$\frac{5x+3}{4}-1+\frac{7}{20}=\frac{x}{60}-\left(\frac{2}{5}-\frac{2x}{3}-\frac{2x+1}{3}\right)$	$\frac{5}{3}$
128	$(3x-2)(3x+2)-\left(x-\frac{2}{3}\right)^2-8x^2=\frac{2}{3}(3x+2)-\frac{32}{9}$	$-\frac{10}{3}$
129	$\left(\frac{5}{3}x+\frac{10}{3}\right)^2-x\left(\frac{25}{9}x+3\right)+\frac{46}{9}=0$	-2
130	$\frac{1}{2}\left(x-\frac{2}{3}\right)^2+x\left(x-\frac{2}{3}\right)\left(x+\frac{2}{3}\right)-x^3=\frac{x}{2}\left(x-\frac{2}{3}\right)-\frac{8}{27}$	$\frac{2}{3}$
131	$\left(3x-\frac{1}{2}\right)^2+\frac{4}{3}\left(x-\frac{1}{6}\right)+2=\left(3x-\frac{1}{2}\right)\left(3x+\frac{1}{2}\right)+12x$	$\frac{1}{6}$
132	$(2x+1)^2-2\left(x+\frac{1}{2}\right)(2x-1)+x+\frac{7}{2}=3$	$-\frac{1}{2}$
133	$\left(\frac{x}{2}+1\right)^2-3\left(\frac{x}{2}+1\right)+\frac{2x}{5}-x=-\frac{34}{5}+\frac{x^2}{4}$	$\frac{48}{11}$
134	$\frac{(x+1)^2}{3}+\frac{(x-1)(x+1)}{2}-3x=\frac{3(x+1)^2}{2}-\frac{2x^2-11}{3}$	-1
135	$\frac{(x-3)^2}{2}+2(x-3)(x+3)+5x=x(x-3)+\frac{x(3x+1)}{2}$	3
136	$\frac{2x-25}{5}+\frac{(9-x)^2}{3}+x^2-20=2+\frac{4x(x-1)}{3}$	0
137	$2x-\left[\frac{x-2}{3}-\frac{1-x}{3}-\left(5x+\frac{2x+1}{2}\right)\right]=\frac{3}{2}$	0
138	$\frac{2-x}{3}-\left[\frac{1}{3}(x+1)-\left(1+\frac{x}{3}\right)\right]-1=\frac{1}{3}x-\frac{1}{3}(x-3)$	-2
139	$\frac{3x-1}{2}-\left[\frac{x-1}{4}-\left(\frac{x+3}{2}-2\right)\right]+\frac{17}{4}=0$	-2

Equazioni di primo grado numeriche intere

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140	$\frac{4}{5}-\left[-\frac{2}{3}-\left(\frac{x}{5}-\frac{19}{4}\right)-\left(\frac{2x+1}{4}+\frac{8}{5}\right)\right]=\frac{2}{3}$	3
141	$\frac{2x}{5}-3\left[\frac{2x-3}{2}-\left(2-\frac{2x+1}{3}\right)\right]-\frac{13}{5}=0$	$\frac{3}{2}$
142	$\left[3\left(1-\frac{x}{4}\right)+2x-\frac{3-2x}{2}\right]+(3-x)^2-\frac{2-3x}{2}=(x-3)^2-\frac{6-x}{2}$	$-\frac{14}{13}$
143	$(x-1)^3+\frac{1}{3}x-\frac{5x-1}{6}=x^3-2x+\frac{x-3}{9}-3x^2-2x+7$	$\frac{27}{23}$
144	$2-x+\frac{x-3}{5}-\left[2(x+1)-\frac{1}{5}(2x-3)\right]=\frac{x-3}{9}-2x-1$	$\frac{6}{23}$
145	$\frac{2}{15}-\left[\frac{3}{4}-\frac{2x-35}{10}-\left(\frac{3}{5}+\frac{2x+5}{4}+\frac{1}{6}\right)\right]=0$	3
146	$2\left[\frac{3}{4}x-\frac{1}{2}\left(x-1-\frac{2x-1}{3}-\frac{2-x}{2}\right)\right]+\frac{7x+1}{3}=0$	$-\frac{2}{3}$
147	$\frac{x}{3}-\left\{-\frac{x}{2}-\left[\frac{x-1}{3}-\left(\frac{x+1}{2}-\frac{2x}{3}\right)\right]\right\}=0$	$\frac{5}{8}$
148	$\frac{1}{2}\left(\frac{1}{4}x-x\right)+\frac{1}{2}\left[3x+\frac{1}{3}\left(2-x+\frac{1}{4}\right)\right]=\frac{1}{8}(x-3)+\frac{1}{3}$	$-\frac{1}{2}$
149	$\frac{4}{5}\left[(x-2)^2+\left(-\frac{1}{2}x-2\right)\left(2-\frac{1}{2}x\right)\right]=x(x-5)-\frac{1}{5}x+1$	$\frac{1}{2}$
150	$\frac{x-\frac{1}{2}}{1-\frac{1}{2}}-\frac{x+\frac{1}{3}}{1-\frac{1}{3}}+\frac{x}{6}=\frac{x-1}{3}-\frac{x+1}{2}-\frac{5}{3}$	$-\frac{6}{5}$
151	$\frac{2x+\frac{3}{4}}{1-\frac{2}{5}}-1=\frac{x-\frac{1}{6}}{\frac{2}{3}}+\frac{1}{3}x+\frac{7}{2}$	2

Equazioni di primo grado numeriche intere

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152	$\frac{1}{8}(x+7)-3=\frac{x+1}{2}-\left[\frac{1}{5}(6-x)+1+\frac{1}{3}(2+x)\right]$	1
153	$\frac{x-\frac{5}{4}}{3+\frac{1}{2}}-\frac{\frac{4x+3}{6}}{2-\frac{5}{6}}=\left(x-\frac{2}{3}\right):\left(2-\frac{4}{3}\right)-\left(1-\frac{6}{7}\right)$	$\frac{1}{5}$
154	$\frac{3x-1}{2}+\frac{\frac{13x-16}{9}}{1+\frac{1}{3}}=\frac{4x-1}{3}-\frac{6-5x}{4}$	*indeterminata*
155	$4\left\{x-3\left[1-x+\frac{2x-5}{6}-2\left(2x+\frac{1}{2}\right)\right]\right\}-10=60x$	*indeterminata*
156	$\frac{7(7-x)}{6}=\frac{3(17-2x)}{9}+\frac{4x-9}{7}-\frac{13-x}{2}+4$	4
157	$\frac{\frac{4x-1}{3}-\frac{x+1}{2}}{\frac{2}{3}}-\frac{\frac{x}{2}-1}{3}=\frac{3\left(\frac{x+1}{4}-2\right)}{\frac{3}{4}}$	-73
158	$\frac{2\left(\frac{3x-1}{2}-\frac{5}{3}\right)-\frac{2x-3}{4}}{\frac{1}{2}-\frac{3}{4}}+\frac{3x-2}{\frac{3}{2}}=\frac{x+4}{\frac{1}{2}}$	$\frac{1}{2}$
159	$\frac{\frac{2x-1}{4}-\frac{4x-6}{5}}{\frac{3}{2}-\frac{4}{5}}-\frac{\frac{x}{3}+\frac{7}{12}-\frac{x-1}{4}}{\frac{3}{4}-\frac{1}{2}}+\frac{7}{2}=0$	2
160	$\frac{2}{3}\left[\frac{1}{2}(2x-1)+\frac{1}{4}(2x+1)\right]=\frac{1}{3}\left[\frac{1}{2}(x+1)-\frac{1}{2}x\right]+\frac{1}{6}$	$\frac{1}{2}$
161	$2x-\frac{1}{3}+\left(1-\frac{1}{3}\right)\left(x-\frac{1}{5}\right)=(x+1)\left(2-\frac{1}{5}\right)+3x-\frac{2}{15}$	-1
162	$\left(\frac{2x+1}{2}-\frac{2x-1}{3}\right)\left(\frac{1}{2}-\frac{1}{3}\right)=\frac{5}{6}\left(\frac{2x+1}{2}+\frac{2x-1}{3}\right)-\frac{4}{3}x$	*indeterminata*

163	$\frac{x+0,1}{0,2}=1,85+0,5x$	$\frac{3}{10}$
164	$(0,2x+1)(0,5x-3)=10(0,1x-0,5)^2$	$\frac{55}{9}$
165	$10x-\frac{x+4}{0,4}=\frac{x-4}{2}+\frac{x-4}{0,2}$	-6
166	$\frac{x-0,2}{2}-\frac{x-0,3}{3}+\frac{x+0,4}{4}-\frac{x+1}{12}=\frac{x-0,1}{3}-\frac{x+1}{12}$	$-\frac{8}{5}$
167	$\frac{x-0,5}{4}-\frac{x-0,5}{3}-\frac{2x-1}{2}=x-\frac{1}{2}$	$\frac{1}{2}$
168	$\frac{0,\bar{2}x-0,\bar{3}}{0,\bar{1}}=0,5$	$\frac{7}{4}$
169	$\frac{0,5x+0,\bar{3}}{0,5}-\frac{0,5x-0,\bar{3}}{0,2}+x=2x-\frac{x+3}{7}+\frac{9}{7}-\frac{x}{6}$	$\frac{31}{46}$
170	$\frac{0,\bar{6}+0,5-x}{0,\bar{6}}+\frac{0,\bar{6}-x}{0,5}=\frac{0,5-x}{0,\bar{6}}+\frac{0,\bar{6}-0,5x}{0,5}$	1
171	$\frac{x+3}{\frac{1}{2}}-11=\frac{1-x}{\frac{1}{8}}-\frac{2x-1}{\frac{1}{3}}$	1
172	$x-(0,\bar{3}x^2+1)(0,\bar{3}x^2-1)+3x\left[\left(\frac{1}{3}x+\frac{2}{3}\right)^3-\frac{2}{9}x(x+2)-\frac{8}{27}\right]=1$	0
173	$\frac{x-4}{\frac{1}{5}}-\frac{x^2-1}{\frac{1}{2}}=-\left[7x+\frac{(x-3)^2}{\frac{1}{2}}\right]$	*indeterminata*
174	$10\left(\frac{3-\frac{x}{3}}{2-\frac{1}{3}}\right)=\left(\frac{x-\frac{1}{2}}{1+\frac{3}{2}}-\frac{x+\frac{3}{2}}{1-\frac{5}{2}}\right):\left(3-\frac{43}{15}\right)$	$\frac{6}{5}$

175	$\frac{5}{3}\left(\frac{4x-3}{5}+\frac{3}{4}\right)-\left(\frac{3x-11}{20}-\frac{1}{4}\right)+\frac{4}{3}=\frac{8(3x-1)}{15}$	7
176	$\frac{\frac{1}{2}-x}{\frac{1}{2}-1}-\frac{x+\frac{1}{3}}{\frac{1}{3}-1}-\frac{x}{6}=\frac{x-1}{3}-\frac{5}{3}-\frac{x+1}{2}$	$-\frac{4}{7}$
177	$2\left(1+\frac{2x-\frac{1}{2}}{1+\frac{1}{2}}\right)-\frac{5}{3}=\frac{3}{4}+\frac{5}{4}\left(\frac{x-\frac{2}{3}}{1-\frac{1}{2}}-1\right)+\frac{3}{4}$	$-\frac{13}{2}$
178	$\frac{\frac{2-x}{3}-\frac{3-x}{2}}{1-\frac{1}{6}}=\frac{\frac{x}{3}-\frac{x}{2}}{\frac{1}{3}+\frac{1}{2}}+1$	5

3. equazioni lineari intere a coefficienti irrazionali

179	$\sqrt{3}(x-1)=3$	$\sqrt{3}+1$
180	$\sqrt{3}x-\sqrt{3}=1+x$	$\sqrt{3}+2$
181	$\sqrt{2}x+4x=3\sqrt{2}x-4$	$-\sqrt{2}-2$
182	$2\sqrt{3}x+2+\sqrt{3}=\sqrt{3}(2\sqrt{2}+1)+\sqrt{2}x$	$\sqrt{2}$
183	$\sqrt{3}x-\sqrt{3}(x+2)=2(\sqrt{2}-x)$	$\sqrt{3}+\sqrt{2}$
184	$3x+3\sqrt{3}=2x+2(x+\sqrt{3})$	$\sqrt{3}$
185	$(3x-1)\sqrt{2}=3+\sqrt{2}$	$\frac{3\sqrt{2}+4}{6}$
186	$x\sqrt{2}+2\sqrt{3}=x\sqrt{3}$	$2(\sqrt{6}+3)$

187	$3x\sqrt{2} = 2 + x\sqrt{8}$	$\sqrt{2}$
188	$(\sqrt{7} - \sqrt{5})x + \sqrt{7} - \sqrt{5} = 0$	-1
189	$(1 + \sqrt{2})(x - \sqrt{2}) = x(2 - \sqrt{2}) - x(1 - \sqrt{2})$	$1 + \sqrt{2}$
190	$2(\sqrt{5} + x) + \sqrt{5}(6 - x) = x(2 + \sqrt{5})$	4
191	$(\sqrt{3} - \sqrt{2})^2 + (x + 2\sqrt{2})(\sqrt{3} - 2\sqrt{2}) - 2 = 0$	$-\sqrt{3} - 2\sqrt{2}$
192	$\sqrt{3} \cdot (x + 2) + \sqrt{3}x(\sqrt{3} + 3) = \sqrt{3}(1 - 2\sqrt{3}) - x + 3$	$-\frac{\sqrt{3}}{4}$
193	$\sqrt{3}(1 - 2\sqrt{3}) + \sqrt{3}(x - 2) = x + \sqrt{3}x(\sqrt{3} - 3) - 3$	$\frac{2\sqrt{3} + 3}{4}$
194	$\sqrt{3}x - (\sqrt{3} + 1) = \sqrt{27}x - 1$	$-\frac{1}{2}$
195	$\sqrt{7}(x - \sqrt{7} + 3) = x + 2$	$\sqrt{7} - 2$
196	$\sqrt{5}(x - \sqrt{5}) - \sqrt{2}(\sqrt{2} - x) = 2\sqrt{10}$	$\sqrt{2} + \sqrt{5}$
197	$\sqrt{2}(x + \sqrt{2}) + \sqrt{5}(x - \sqrt{5}) = 0$	$-\sqrt{2} + \sqrt{5}$
198	$\sqrt{2}(x - 1) + 1 = \sqrt{3}(\sqrt{3} + 2)$	$\sqrt{2} + \sqrt{6} + 1$
199	$x\sqrt{2}(\sqrt{3} + 1) = \sqrt{2}(1 + x) + \sqrt{3}$	$\frac{\sqrt{3}}{3} + \frac{\sqrt{2}}{2}$
200	$(2 - \sqrt{3})x - 2x - \sqrt{6} = -\sqrt{3}(2\sqrt{2} + 1)$	$\sqrt{2} + 1$

201	$(2\sqrt{7}-5\sqrt{5})(2x-1)+(4\sqrt{5}-2\sqrt{7})(x-3)=0$	$\frac{5\sqrt{35}-77}{76}$
202	$(x+\sqrt{2})^2-(x+\sqrt{3})^2=6$	$\frac{7}{2(\sqrt{2}-\sqrt{3})}$
203	$x(\sqrt{3}-1)^2=2(2x-\sqrt{6})$	$\sqrt{2}$

4. equazioni lineari intere a coefficienti irrazionali e frazioni numeriche

204	$\frac{x-1}{2\sqrt{2}-2}+\frac{x}{\sqrt{2}+1}=1$	$\frac{10\sqrt{2}+9}{17}$
205	$\frac{1-x}{2}-\frac{x}{\sqrt{2}-2}=\frac{\sqrt{2}x}{\sqrt{2}-1}$	$\frac{3-\sqrt{2}}{7}$
206	$\frac{x}{3+\sqrt{3}}+2-\frac{x}{3-\sqrt{3}}=0$	$2\sqrt{3}$
207	$\frac{5\sqrt{2}}{2\sqrt{3}}x-\frac{3}{\sqrt{6}}=\frac{3\sqrt{6}}{2}x$	$-\frac{3}{4}$
208	$\frac{5x-2\sqrt{2}}{\sqrt{2}}-\frac{x-3}{2}-\frac{11x-1}{3\sqrt{2}}=0$	$\frac{9\sqrt{2}+1}{23}$
209	$\frac{x+1}{\sqrt{2}}+\frac{x+\sqrt{2}}{\sqrt{2}}=\frac{x-1}{2}$	$-\sqrt{2}-1$
210	$\frac{x}{\sqrt{2}+3}-\frac{x}{3-\sqrt{2}}+\frac{8}{7}=0$	$2\sqrt{2}$
211	$\frac{x}{\sqrt{5}}-\frac{6}{\sqrt{5}-1}=\frac{x(\sqrt{2}-1)}{5-\sqrt{5}}$	$10+2\sqrt{10}$
212	$(\sqrt{15}-\sqrt{5}+2)x=\frac{3(2x+1)}{\sqrt{3}}-1$	$\sqrt{5}+2$

213	$\frac{3(x-3\sqrt{2})}{4\sqrt{3}}-\frac{x-2\sqrt{3}}{3\sqrt{2}}=\frac{1}{2}$	$2\sqrt{3}+3\sqrt{2}$
214	$\frac{x-1}{\sqrt{2}-1}-\frac{x+1}{\sqrt{2}+1}+x=\frac{\sqrt{2}+2}{1+\sqrt{2}}$	$\sqrt{2}$
215	$\frac{x}{\sqrt{3}-1}-\frac{x-1}{\sqrt{3}+1}=\frac{1}{2}$	$\frac{2-\sqrt{3}}{2}$
216	$\frac{x+\sqrt{3}}{\sqrt{3}+1}-\frac{x-2\sqrt{3}}{\sqrt{3}-1}+2\sqrt{3}=0$	$\frac{9+5\sqrt{3}}{2}$
217	$\frac{2\sqrt{2}-2x+4}{2}+3=\frac{x-1}{2\sqrt{2}}$	5
218	$\frac{3x}{\sqrt{2}+1}+7=\frac{7-x}{\sqrt{2}-1}$	$\frac{4+\sqrt{2}}{2}$
219	$\frac{x-3}{\sqrt{3}-1}=\frac{x+3}{\sqrt{3}+1}$	$3\sqrt{3}$
220	$\frac{2x}{3+\sqrt{3}}=\sqrt{3}-\frac{x-2}{3-\sqrt{3}}$	$\sqrt{3}+1$
221	$\frac{x-2\sqrt{3}}{3}+\frac{x+3}{2\sqrt{3}}=0$	$2\sqrt{3}-3$
222	$\frac{\sqrt{5}\cdot(x-\sqrt{5})-(x-1)}{\sqrt{5}+1}-\frac{x-\sqrt{5}x}{4}=1$	$\sqrt{5}+1$

5. equazioni lineari frazionarie

223	$4-\frac{5}{x}=0$	$\frac{5}{4}$
224	$\frac{6}{x}-2=4$	1

Equazioni di primo grado numeriche intere

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225	$\frac{7x+14}{x-2}=0$	-2
226	$\frac{1}{x}+\frac{1}{2}=4$	$\frac{2}{7}$
227	$\frac{3}{x-2}=0$	*impossibile*
228	$\frac{3}{x-10}+1=0$	7
229	$\frac{3x-16}{x}=\frac{5}{3}$	12
230	$\frac{4}{3x-1}=\frac{1}{2+x}$	-9
231	$\frac{1}{3}\left(9-\frac{42}{x}\right)=\frac{4}{x}-6$	2
232	$\frac{2y-3y^2}{y+1}=\frac{5}{y+1}-3y$	1
233	$\left(\frac{4}{x}+\frac{x}{4}\right):\left(\frac{4}{x}-\frac{x}{4}\right)=\frac{x^2-2x}{16-x^2}$	-8
234	$\frac{2}{3}\left(1-\frac{2}{x}\right)+\frac{3}{2}\left(1-\frac{3}{x}\right)=1$	5
235	$\frac{2}{x+1}=\frac{1}{x-3}$	7
236	$\frac{2}{x+1}=\frac{3}{x-1}$	-5
237	$\frac{y-2}{y+1}=\frac{y-4}{y+3}$	$\frac{1}{2}$

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238	$\frac{x+1}{x-2}+\frac{x-1}{x+2}=2$	*impossibile*
239	$\frac{4(x-3)}{x+3}-4=\frac{3}{x-3}$	$\frac{7}{3}$
240	$\frac{1}{1-x}+\frac{1}{x-1}=1$	*impossibile*
241	$\frac{1}{x-3}=-\frac{2}{x+5}$	$\frac{1}{3}$
242	$\frac{x^2+3}{x+4}=x-2$	$\frac{11}{2}$
243	$\frac{4}{x-4}=\frac{4}{x+4}$	*impossibile*
244	$\frac{2-x}{3x+6}+\frac{1-3x}{2+x}=2$	$-\frac{7}{16}$
245	$\frac{y+2}{y-4}=\frac{y+1}{y-3}$	1
246	$\frac{z+1}{z-1}-\frac{2z-2}{z+1}=\frac{z+1}{1-z}$	0
247	$\frac{5x}{2x+3}=1+\frac{3x}{2x-3}$	$\frac{3}{8}$
248	$\frac{2x-4}{2x+2}=\frac{x}{x+1}-\frac{1}{x}$	1
249	$\frac{4}{x+1}-\frac{3x}{x-3}=\frac{9x}{9-3x}$	*impossibile*
250	$\frac{x-3}{x+1}=-5\frac{2x-1}{x+1}$	$\frac{8}{11}$

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251	$\frac{3}{x-1}=\frac{2}{3}$	$\frac{11}{2}$
252	$\frac{1}{2x-1}=\frac{1}{x}-\frac{1}{2x+2}$	2
253	$\frac{x}{2x+6}=\frac{1}{2}+\frac{x+1}{x+3}$	$-\frac{5}{2}$
254	$\frac{x}{x+1}=\frac{1}{3x+3}+\frac{2}{3}$	3
255	$\frac{2x^2-1}{2x+4}+1=\frac{x^2}{x+2}$	$-\frac{3}{2}$
256	$\frac{1+x}{x}-\frac{2}{x}=\frac{1+x}{x-1}$	$\frac{1}{3}$
257	$\frac{1}{x-1}+\frac{1}{x-2}=\frac{2}{x-3}$	$\frac{5}{3}$
258	$\frac{x^2-1}{2x+3}-\frac{3x+1}{4x+6}=\frac{x}{2}$	$-\frac{1}{2}$
259	$\left(\frac{1}{x}-1\right)(x+1)+2x+1=(x-1)\left(\frac{1}{x}+1\right)$	-2
260	$\frac{1}{x+1}-\frac{4}{x+2}=\frac{1}{x+5}-\frac{4}{x+3}$	1
261	$\frac{4}{x-1}+\frac{6}{x-5}=\frac{1}{x-7}+\frac{9}{x-3}$	9
262	$\frac{4x}{5+x}-\frac{10}{x}=\frac{4(5+x)}{x}$	-3

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263	$\frac{x+\frac{1}{2}}{x}-\frac{x-\frac{1}{2}}{x}=1$	1
264	$\frac{x}{2(x+1)}=\frac{x^2}{x+1}-x-1$	$-\frac{2}{5}$
265	$5+\frac{4-2x}{x+2}+\frac{5}{1-x}=\frac{3x+2}{x-1}$	-14
266	$\frac{1}{x^2-x}=\frac{1}{x^2-1}+\frac{1}{x^2-x}$	*impossibile*
267	$3\left[\frac{1}{2}(x-1)+\frac{4}{x}\right]=\frac{1+3x}{2}$	6
268	$\frac{2}{x-3}-\frac{2x-5}{x^2-9}=0$	*impossibile*
269	$\frac{x-7}{x^2-x}-\frac{2}{x-1}=\frac{3}{x}$	-1
270	$\frac{1+3x}{x}+\frac{4}{x-2x^2}=\frac{6x}{2x-1}$	-5
271	$\frac{2y}{y-2}-\frac{1-y}{2y-y^2}-2=\frac{1}{y}$	$-\frac{3}{2}$
272	$\frac{x+1}{x-1}-\frac{3+6x}{x+1}=\frac{3x-5x^2+6}{(x+1)(x-1)}$	*impossibile*
273	$\frac{1}{2-3x}-\frac{6}{3x^2-2x}=\frac{5}{x}$	$\frac{1}{4}$
274	$\frac{x-1}{x+1}-\frac{x+1}{x-1}+\frac{8}{x^2-1}=0$	2

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275	$\frac{2}{1-2x}+\frac{1}{2x-1}=\frac{1-5x}{1-4x^2}$	0
276	$\frac{2}{x+2}-\frac{6}{3-x}=\frac{32}{x+6-x^2}$	$-\frac{19}{4}$
277	$\frac{1+y}{y+3}+\frac{y+1}{y-3}=\frac{2(y^2+3)}{y^2-9}-\frac{1}{y+3}$	*impossibile*
278	$\frac{x+1}{x}-\frac{x}{x+4}=\frac{x+2}{x^2+4x}$	$-\frac{1}{2}$
279	$\frac{4}{x}+\frac{4x}{x-3}+\frac{13-4x^2}{x^2-3x}=0$	$-\frac{1}{4}$
280	$\frac{4-25x}{x^2+2x}+3-\frac{3x+1}{x}=0$	$\frac{1}{13}$
281	$\frac{3x+3}{3x+1}=\frac{3x^2}{3x^2+x}-\frac{1}{x}$	$-\frac{1}{6}$
282	$\frac{1}{x^2-3x}+\frac{1}{x^2+x}=\frac{4}{x^2-2x-3}$	*impossibile*
283	$\frac{1}{x^2+4x+3}-\frac{1}{x^2-2x-3}=\frac{1}{x^2-9}$	-7
284	$\frac{1}{x^2-1}-\frac{1}{x-x^2}=\frac{2}{x^2+x}$	*impossibile*
285	$\frac{1}{2x-4}-\frac{2}{x+2}=\frac{x+5}{3x^2-12}$	$\frac{20}{11}$
286	$\frac{10}{(x-5)^2}+\frac{x}{x-1}=1$	*impossibile*
287	$\frac{4+x}{x-3}-\frac{3+x}{x-2}=\frac{5}{x^2-x-6}$	*impossibile*

Equazioni di primo grado numeriche intere

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288	$\frac{x+5}{x+3}-\frac{3x}{x+2}=\frac{6-2x^2}{x^2+5x+6}$	2
289	$\frac{1}{x^2-9}=\frac{3}{x+3}-\frac{2}{2x+6}$	$\frac{7}{2}$
290	$\frac{1}{3(x+4)}+\frac{4}{3x}=\frac{x-1}{8x+2x^2}$	-5
291	$\frac{2}{x^2-x}-\frac{1}{x^2+x}=\frac{4}{(x-1)(x+1)}$	*impossibile*
292	$\frac{2}{x^2-1}=\frac{3}{x^2-4}-\frac{1}{x^2+x-2}$	-7
293	$\frac{3x-12}{x^2-16}=0$	*impossibile*
294	$\left(\frac{3}{2x-2}-\frac{3}{2x+2}\right)\left(\frac{1}{2x}-\frac{1}{2}\right)+\frac{1}{2x+2}=\frac{1}{x}$	-5
295	$\frac{1}{2x-x^2}+\frac{1}{x^2-4}=\frac{2}{x^2+2x}$	1
296	$\frac{1}{2x+4}-\frac{1}{4-2x}=\frac{x+1}{x^2-4}$	*impossibile*
297	$\frac{5}{y^3-1}+\frac{y}{y^2+y+1}=\frac{1}{y-1}$	2
298	$\frac{1}{x^2+4x+3}=\frac{3}{18-2x^2}+\frac{1}{x^2-2x-3}$	*impossibile*
299	$\frac{x-2}{x^3-x}+\frac{1}{x^2-1}=\frac{2}{x^2+x}$	*per* $x\neq 0$ $x\neq \pm 1$ *indeterminata*

Equazioni di primo grado numeriche intere

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300	$\frac{4}{3x-4}-\frac{4}{3x+4}=\frac{6(2x+5)}{9x^2-16}-\frac{1}{3x-4}$	$\frac{2}{3}$
301	$\frac{2(x^2+2)}{x^2-4}-1=\frac{x+1}{x-2}$	*impossibile*
302	$\frac{3}{x+3}=\left(\frac{x-3}{x+3}-\frac{x+3}{x-3}\right):\left(\frac{x-3}{x+3}+1\right)$	-1
303	$\frac{1}{x^2+2x-3}-\frac{1}{x^2-3x+2}=-\frac{1}{(x-2)(x+3)}$	6
304	$\frac{2x}{x^2+1}=\left(\frac{x+1}{x-1}-\frac{x-1}{x+1}\right):\left(\frac{x-1}{x+1}+\frac{x+1}{x-1}\right)$	$\forall x \neq \pm 1$ *indeterminata*
305	$\frac{2+x}{x+2}+\frac{x+1}{x-2}=\frac{2(x^2+2)}{x^2-4}$	*impossibile*
306	$\frac{2}{x^2-x-2}+\frac{1}{3x^2+2x-1}=\frac{7x-11}{3x^3-4x^2-5x+2}$	*impossibile*
307	$\frac{4x-x^2}{x^4-16}+\frac{1}{4x-8}=\frac{1}{4x+8}$	-1
308	$\frac{\frac{1}{x}+\frac{1}{3}}{\frac{1}{x}-\frac{1}{3}}:\frac{x^2+3x}{3x-9}-\frac{x}{3}+\frac{2x-3}{6}=2$	$-\frac{6}{5}$
309	$\frac{\frac{1}{y-2}+\frac{1}{y+2}}{\frac{1}{y+2}-\frac{1}{y-2}}=2$	-4
310	$\frac{x+\frac{1}{2}}{x-\frac{1}{2}}=2-\frac{x+4}{x-4}$	$\frac{8}{9}$
311	$\frac{1-2z}{z^2+3z}+\frac{4z-6}{2z^2-6z}+\frac{12}{9-z^2}=0$	-6

312	$\frac{x+2}{x^2-2x}-\frac{8}{x^2-4}=\frac{2x}{x^2-4}-\frac{x-2}{x^2-2x}$	*impossibile*
313	$-\frac{4}{x}-\frac{4}{1-x}-\frac{5}{x+x^2}=\frac{5}{x^2-1}$	$\frac{3}{2}$
314	$\frac{2x}{x^2-3x}+\frac{12}{9-x^2}=\frac{2x}{x^2+3x}$	*per* $x \neq -3$ *indeterminata*
315	$\frac{1}{5x+5}+\frac{1}{5x-5}+\frac{1}{5}=\frac{x^2+5}{5+5x^2-10x}$	$-\frac{1}{2}$
316	$\frac{3}{x^2-x}+\frac{3}{x^2+x}+\frac{3}{x}=\frac{x-3x^2}{x-x^3}$	$\frac{3}{7}$
317	$\frac{2}{x-2}-\frac{x+1}{x^2-5x+6}=\frac{x-5}{x^2-6x+8}$	$\frac{13}{3}$
318	$\frac{x+3}{x-1}+\frac{1-x}{x+3}=\frac{4x+28}{x^2+2x-3}$	5
319	$\frac{x+3}{x+2}+\frac{4}{x^2+x-2}=\frac{2x+1}{2x-2}$	0
320	$\frac{20-6x}{x^2-8x+15}-\frac{5}{5-x}=\frac{2}{3-x}$	*impossibile*
321	$\frac{x-2}{x^2-2x+1}-\frac{1}{2x-2}=\frac{2}{x-1}$	$\frac{1}{3}$
322	$\frac{2x-6}{x^2-2x-15}=\frac{1}{x+3}+\frac{2}{x-5}$	-7
323	$\frac{x^2}{2}-9\frac{x-3}{4x-6}+\frac{2x^3}{3-2x}=\frac{6x^2-9x}{6-4x}$	*impossibile*
324	$\frac{x}{x-3}=\frac{x}{x+3}+\frac{2}{x^2-9}+1-\frac{x^2}{x^2-9}$	$-\frac{7}{6}$

Equazioni di primo grado numeriche intere

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325	$\frac{x}{x-5}=\frac{2}{x^2-25}+1$	$-\frac{23}{5}$
326	$\frac{x}{x+1}=\frac{2x+1}{2x+2}+\frac{3}{x^2-1}$	-5
327	$\frac{6x+4}{4x^2+4x+1}-\frac{4x}{4x^2-1}=\frac{1}{2x+2}-\frac{2}{4x^2-1}$	$-\frac{3}{4}$
328	$\frac{x^2}{x^2-5x-14}+\frac{3x}{x+2}+\frac{2x}{x-7}=\frac{5x+6}{x+2}+1$	$-\frac{56}{17}$
329	$\frac{x+7}{x+2}+x=\frac{x^2-1}{x+1}-\frac{1}{x+2}-\frac{3-2x^2}{x^2+x+2}$	*impossibile*
330	$\frac{x^2-1}{x^2-x}=\frac{x}{x-4}-\frac{3x^2}{x(x-1)(x-4)}$	*impossibile*
331	$\frac{1}{-x^2+2x-1}=-\frac{3}{x-1}-\frac{2}{3x-3}$	$\frac{14}{11}$
332	$\frac{4x-1}{4x^2-1}=-\frac{3x+5}{1-2x}+\frac{1-3x}{2x+1}$	$-\frac{5}{14}$
333	$\frac{2x}{x-3}-\frac{x^2}{x-2}+\frac{3x-x^2}{2-x}=\frac{x-x^2}{x^2-5x+6}$	0
334	$\frac{2x+1}{x+1}+\frac{5}{1-x}=\frac{2}{x^2-1}$	4
335	$\frac{5}{4x^2-4x+1}-\frac{1}{(2x+1)^2}-\frac{3}{(4x^2-1)^2}=\frac{20x^2+27}{16x^4-8x^2+1}-\frac{1}{4x^2-1}$	$\frac{9}{8}$

6. equazioni lineari frazionarie a coefficienti irrazionali

336	$\frac{x+\sqrt{5}}{x-\sqrt{5}}=1-\frac{\sqrt{2}}{\sqrt{5}}$	$\sqrt{5}-5\sqrt{2}$

337	$\frac{1+3\sqrt{2}}{x^2-4}=\frac{\sqrt{2}-\sqrt{3}}{x-2}-\frac{\sqrt{2}+\sqrt{3}}{x+2}$	$\frac{\sqrt{6}-\sqrt{3}}{6}$
338	$\frac{3x+2\sqrt{3}}{3x-2\sqrt{3}}=\frac{6x+4\sqrt{3}}{3x-2\sqrt{3}}-3$	$\frac{4}{3}\sqrt{3}$
339	$\frac{x-2\sqrt{2}}{x-\sqrt{2}}-\frac{x-\sqrt{2}}{x-2\sqrt{2}}=\frac{3\sqrt{2}}{4\sqrt{2}-2x}$	$3\sqrt{2}$