indice

Negli esercizi presentati, si ritengono valide le condizioni di esistenza, tranne ove diversamente specificato.

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.

trovare le condizioni di esistenza C.E dei seguenti radicali

1	$\sqrt{a}$	$a \geq 0$
2	$\sqrt{-a}$	$a \leq 0$
3	$\sqrt[3]{-a}$	$\forall a \in R$
4	$\sqrt[4]{a^2}$	$\forall a \in R$
5	$\sqrt[3]{a^2}$	$\forall a \in R$
6	$\sqrt{2a}$	$a \geq 0$
7	$\sqrt[3]{2a}$	$\forall a \in R$
8	$\sqrt{4ab^2}$	$a \geq 0, \forall b \in R$
9	$\sqrt[3]{4ab^2}$	$\forall a, b \in R$
10	$\sqrt{5x}$	$x \geq 0$
11	$\sqrt[3]{5x}$	$\forall x \in R$
12	$\sqrt{4y^5}$	$y \geq 0$
13	$\sqrt[3]{4y^5}$	$\forall y \in R$
14	$\sqrt{8a^4}$	$\forall a \in R$

15	$\sqrt[6]{-a}$	$a \leq 0$
16	$\sqrt[3]{-7a^5}$	$\forall a \in R$
17	$\sqrt[5]{2ab^2}$	$\forall a, b \in R$
18	$\sqrt{2ab^2}$	$a \geq 0, \forall b \in R$
19	$\sqrt{x+2}$	$x \geq -2$
20	$\sqrt[3]{x+2}$	$\forall x \in R$
21	$\sqrt[4]{2x-1}$	$x \geq \frac{1}{2}$
22	$\sqrt[7]{2x-1}$	$\forall x \in R$
23	$\sqrt[6]{6a+5}$	$a \geq -\frac{5}{6}$
24	$\sqrt[7]{6a+5}$	$\forall a \in R$
25	$\sqrt[4]{-y^2}$	$\nexists y$
26	$\sqrt[3]{-y^2}$	$\forall y \in R$
27	$\sqrt{x^2+y^2}$	$\forall x, y \in R$
28	$\sqrt[7]{x^3+y^2}$	$\forall x, y \in R$

29	$\sqrt{a(a-2)}$	$a \leq 0 \vee a \geq 2$
30	$\sqrt[3]{a(a-2)}$	$\forall a \in R$
31	$\sqrt{(3a-1)(a-2)}$	$a \leq \frac{1}{3} \vee a \geq 2$
32	$\sqrt[3]{(3a-1)(a-2)}$	$\forall a \in R$
33	$\sqrt{9-x^2}$	$-3 \leq x \leq 3$
34	$\sqrt[3]{9-x^2}$	$\forall x \in R$
35	$\sqrt{-x^2-y^2}$	$\nexists x, y$
36	$\sqrt[5]{-x^2-y^2}$	$\forall x, y \in R$
37	$\sqrt[6]{-x+1}$	$x \leq 1$
38	$\sqrt[7]{-x+1}$	$\forall x \in R$
39	$\sqrt{\frac{1}{x}}$	$x > 0$
40	$\sqrt[3]{\frac{1}{x}}$	$x \neq 0$
41	$\sqrt[4]{\frac{a-1}{a}}$	$a < 0 \vee a \geq 1$

42	$\sqrt[5]{\frac{a-1}{a}}$	$a \neq 0$
43	$\sqrt[5]{\frac{a^2+2}{2a}}$	$a \neq 0$
44	$\sqrt{\frac{a^2+2}{2a}}$	$a > 0$
45	$\sqrt{\frac{a-1}{a+1}}$	$a < -1 \vee a \geq 1$
46	$\sqrt[3]{\frac{a-1}{a+1}}$	$a \neq -1$
47	$\sqrt{\frac{x+7}{x}}$	$x \leq -7 \vee x > 0$
48	$\sqrt[3]{\frac{x}{x+7}}$	$x \neq -7$
49	$\sqrt[7]{\frac{a^2-1}{a}}$	$a \neq 0$
50	$\sqrt[4]{\frac{a^2-1}{a}}$	$-1 \leq a < 0 \vee a \geq 1$
51	$\sqrt{\frac{a}{a^2-1}}$	$-1 < a \leq 0 \vee a > 1$
52	$\sqrt[3]{\frac{a}{a^2-1}}$	$a \neq \pm 1$
53	$\sqrt[4]{\frac{(a-1)(a-2)}{(a-3)^2}}$	$a \leq 1 \vee a \geq 2 \wedge a \neq 3$

54	$\sqrt[3]{\frac{(a-1)(a-2)}{(a-3)^2}}$	$a \neq 3$
55	$\frac{\sqrt{7}}{\sqrt[3]{x+7}}$	$x \neq 7$
56	$\sqrt{\frac{x-2}{4-x}}$	$2 \leq x < 4$
57	$\frac{\sqrt{x-2}}{\sqrt{4-x}}$	$2 \leq x < 4$
58	$\sqrt{a-3} - \sqrt{a+2}$	$a \geq 3$
59	$\sqrt{\frac{x-2}{x-4}}$	$x \leq 2 \vee x > 4$
60	$\frac{\sqrt{x-2}}{\sqrt{x-4}}$	$x > 4$
61	$\sqrt[4]{\frac{4x^2+4x+1}{x^2+5x-14}}$	$x < -7 \vee x > 2 \vee x = \frac{1}{2}$
62	$\frac{\sqrt{8x^2-4x}}{\sqrt{6x^2-5x-1}}$	$x \leq 0 \vee x > \frac{1}{2}$
63	$\frac{\sqrt{x-7}}{\sqrt[4]{\lvert x-2 \rvert}}$	$x \geq 7$
64	$\frac{\sqrt{x-2}}{\sqrt[4]{\lvert x-7 \rvert}}$	$x \geq 2 \wedge x \neq 7$
65	$\frac{\sqrt{\lvert x \rvert + 1}}{\sqrt[3]{x}}$	$x \neq 0$
66	$\frac{\sqrt[3]{\lvert x-1 \rvert}}{\sqrt{x-2}}$	$x > 2$

67	$\frac{\sqrt{\lvert x+1\rvert}}{\sqrt{\lvert x-1\rvert}}$	$x \neq 1$
68	$\sqrt{\left\lvert\frac{x-2}{3-x}\right\rvert+1}$	$x \neq 3$
69	$\frac{\sqrt[3]{(x-1)(x+2)}}{\sqrt[5]{9-\lvert x-2\rvert}}$	$x \neq -7 \vee x \neq 11$
70	$\sqrt[3]{4a-2+\sqrt{6a-2a^2}}$	$0 \leq a \leq 3$
71	$\sqrt[3]{\frac{2+\sqrt{a^2+\lvert a\rvert}}{2-\sqrt{7}}}$	$\forall a \in R$
72	$\sqrt{8-\lvert y\rvert}-\sqrt{\frac{y-3}{y+3}}$	$-8 \leq y < -3 \vee 3 \leq y \leq 8$
73	$\frac{\sqrt{10+x-\lvert 2x\rvert}}{1+2\lvert x\rvert}$	$-\frac{10}{3} \leq x \leq 10$
74	$\sqrt[5]{\frac{a^2-4a+3}{\lvert a^2-1\rvert+\lvert 8a+8\rvert}}$	$a \neq -1$
75	$\sqrt[20]{\left\lvert\frac{x-1}{x}\right\rvert-4}+\sqrt[3]{x-2}$	$-\frac{1}{3} \leq x < 0 \vee 0 < x \leq \frac{1}{5}$
76	$\sqrt{\frac{\lvert a^2-4\rvert-5}{2+\lvert a+1\rvert}}+\sqrt[8]{2-\frac{a-1}{a+4}}$	$a \leq -9 \vee -4 < a \leq -3 \vee a \geq 3$
77	$\sqrt{\frac{4y^2-1}{y}}-\frac{2y-8}{\sqrt[6]{y\lvert y\rvert+\lvert y^2-1\rvert-7}}$	$x > 2$

semplificare i seguenti radicali

78	$\sqrt{25}$	5
79	$\sqrt{121}$	11
80	$\sqrt[3]{8}$	2
81	$\sqrt{64}$	8
82	$\sqrt[3]{64}$	4
83	$\sqrt[4]{64}$	$\sqrt{8}$
84	$\sqrt[6]{64}$	2
85	$\sqrt[5]{32}$	2
86	$\sqrt[4]{\frac{81}{16}}$	$\frac{3}{4}$
87	$\sqrt[4]{\frac{25}{49}}$	$\sqrt{\frac{5}{7}}$
88	$\sqrt[6]{\frac{4}{9}}$	$\sqrt[3]{\frac{2}{3}}$
89	$\sqrt[6]{a^2}$	$\sqrt[3]{a}$
90	$\sqrt[6]{x^3}$	$\sqrt{x}$
91	$\sqrt[15]{x^{18}}$	$\sqrt[5]{x^6}$

92	$\sqrt[15]{a^{25}}$	$\sqrt[3]{a^5}$
93	$\sqrt[20]{x^{10}}$	$\sqrt{x}$
94	$\sqrt[3]{x^6y^9}$	x^2y^3
95	$\sqrt[18]{a^6b^9}$	$\sqrt[6]{a^2b^3}$
96	$\sqrt[20]{x^{10}y^5}$	$\sqrt[4]{x^2y}$
97	$\sqrt[10]{3^6\,2^4\,5^2}$	$\sqrt[5]{3^3\,2^2\,5}$
98	$\sqrt{a^4b^8c^6}$	$a^2b^4c^3$
99	$\sqrt[3]{a^9b^6t^{12}}$	$a^3b^2t^4$
100	$\sqrt[20]{a^5b^{10}c^{15}}$	$\sqrt[4]{ab^2c^3}$
101	$\sqrt[24]{x^4z^{12}y^8}$	$\sqrt[6]{x\,z^3y^2}$
102	$\sqrt[12]{64\,a^6b^6}$	$\sqrt{2ab}$
103	$\sqrt[7]{x^{14}y^{42}z^{28}}$	$x^2y^6z^4$
104	$\sqrt[4]{9a^2-12ab+4b^2}$	$\sqrt{3a-2b}$
105	$\sqrt[6]{4x^4-20xy^3-20x^3y+33x^2y^2+4y^4}$	$\sqrt[3]{(x-2y)(y-2x)}$
106	$\sqrt[8]{\dfrac{16x^{20}y^{16}(x-y)^8}{81(a-c)^4}}$	$\sqrt{\dfrac{2x^5y^4(x-y)^2}{3(a-c)}}$

107	$\sqrt[9]{\dfrac{(x+1)^3}{8a^6b^3}}$	$\sqrt[3]{\dfrac{x+1}{2\,a^2\,b}}$
108	$\sqrt[33]{\dfrac{(x+y)^{23}(x-y)^{12}}{(x^2-y^2)}}$	$\sqrt[3]{(x+y)^2\,(x-y)}$
109	$\sqrt[n]{\dfrac{(a+2b)^{2n^2}}{(a-b)^{3n}\,c^{n^2+n}}}$	$\dfrac{(a+2b)^{2n}}{(a-b)^3\,c^{n+1}}$
110	$\sqrt[5a]{x^{25a^2}y^{10a^3}(x-y)^{15a}}$	$x^{5a}y^{2a^2}(x-y)^3$
111	$\sqrt[x^2-y^2]{\dfrac{a^{2xy-y^2}}{b^{x-y}a^{x^2}}}$	$\sqrt[x+y]{\dfrac{1}{b\,a^{x-y}}} = \sqrt[x+y]{\dfrac{a^{y-x}}{b}}$

ridurre allo stesso indice i seguenti gruppi di radicali

112	$\sqrt[3]{16}$	$\sqrt{27}$	$\sqrt[4]{125}$	$\sqrt[12]{2^{16}}$ $\sqrt[12]{3^{18}}$ $\sqrt[12]{5^9}$
113	$\sqrt[5]{7}$	$\sqrt{\dfrac{5}{3}}$	$\sqrt[10]{\dfrac{2}{5}}$	$\sqrt[10]{7^2}$ $\sqrt[10]{\dfrac{5^5}{3^5}}$ $\sqrt[10]{\dfrac{2}{5}}$
114	$\sqrt[5]{ab}$	$\sqrt[10]{a^3b^2}$	$\sqrt[15]{a^2b^3}$	$\sqrt[30]{a^6b^6}$ $\sqrt[30]{a^9b^6}$ $\sqrt[30]{a^4b^6}$
115	$\sqrt[2]{a^3+b^2}$	$\sqrt[12]{a^2-b^2}$	$\sqrt[6]{a^2-ab}$	$\sqrt[12]{(a^3+b^2)^6}$ $\sqrt[12]{a^2-b^2}$ $\sqrt[12]{(a^2-ab)^2}$
116	$\sqrt[n]{\dfrac{x+y}{xy^2}}$	$\sqrt[2n]{\dfrac{x^2+y^2}{xy}}$	$\sqrt[3n]{\dfrac{1+x}{x^2y}}$	$\sqrt[6n]{\dfrac{(x+y)^6}{x^6y^{12}}}$ $\sqrt[6n]{\dfrac{(x^2+y^2)^3}{x^3y^3}}$ $\sqrt[6n]{\dfrac{(1+x)^2}{x^4y^2}}$

117	$\sqrt[8]{\frac{(1-a)^2}{1+a}}$ $\sqrt[4]{\frac{a+1}{(a-1)^2}}$ $\sqrt[6]{\frac{(a-1)^2}{(a+1)^3}}$	$\sqrt[24]{\frac{(1-a)^6}{(1+a)^3}}$ $\sqrt[24]{\frac{(1+a)^6}{(a-1)^{12}}}$ $\sqrt[24]{\frac{(a-1)^8}{(a+1)^{12}}}$

moltiplicazione tra radicali

118	$\sqrt{13}\cdot\sqrt{3}$	$\sqrt{39}$
119	$\sqrt{5}\cdot\sqrt{5}$	5
120	$\sqrt[4]{2}\cdot\sqrt[4]{2^3}$	2
121	$\sqrt[3]{7}\cdot\sqrt[3]{7^2}$	7
122	$\sqrt[3]{2}\cdot\sqrt[3]{4}$	2
123	$\sqrt[3]{\frac{1}{4}}\cdot\sqrt[3]{\frac{5}{6}}\cdot\sqrt[3]{\frac{3}{5}}$	$\frac{1}{2}$
124	$\sqrt[8]{5}\cdot\sqrt[8]{\frac{5}{16}}\cdot\sqrt[8]{\frac{1}{25}}$	$\sqrt{\frac{1}{2}}$
125	$\sqrt{2}\cdot\sqrt[3]{2}$	$\sqrt[6]{2^5}$
126	$\sqrt{2}\cdot\sqrt[5]{2}$	$\sqrt[10]{2^7}$

127	$\sqrt{2} \cdot \sqrt[4]{2}$	$\sqrt[4]{2^3}$
128	$\sqrt{2} \cdot \sqrt[3]{3}$	$\sqrt[6]{72}$
129	$\sqrt[4]{2} \cdot \sqrt[3]{2}$	$\sqrt[12]{128}$
130	$\sqrt{3} \cdot \sqrt[3]{3} \cdot \sqrt[4]{3} \cdot \sqrt[12]{3}$	$\sqrt[6]{3^7}$
131	$\sqrt{2} \cdot \sqrt[3]{2} \cdot \sqrt[4]{2} \cdot \sqrt[12]{2^5}$	$\sqrt{8}$
132	$\sqrt[6]{a} \cdot \sqrt{a} \cdot \sqrt[9]{a^2}$	$\sqrt[9]{a^8}$
133	$\sqrt{3a} \cdot \sqrt{a} \cdot \sqrt[4]{2a^3}$	$\sqrt[4]{18a^7}$
134	$\sqrt[3]{2ab^2} \cdot \sqrt[6]{2ab^2}$	$\sqrt{2ab^2}$
135	$\sqrt[3]{\frac{b}{c}} \cdot \sqrt[4]{\frac{a}{b}} \cdot \sqrt[6]{\frac{c^2}{a}}$	$\sqrt[12]{ab}$
136	$\sqrt{\frac{b}{a}} \cdot \sqrt[3]{\frac{a}{b}} \cdot \sqrt[6]{\frac{a}{b}}$	1

137	$\sqrt[6]{\frac{4x^2y}{5ab}} \cdot \sqrt[8]{\frac{25a^3b}{2x^4y^2}} \cdot \sqrt[12]{\frac{4x^2y}{5ab^3}}$	$\sqrt[24]{\frac{2^9a^3}{b^7}}$
138	$\sqrt[3]{\frac{a-b}{a+b}} \cdot \sqrt{\frac{a+b}{a-b}}$	$\sqrt[6]{\frac{a+b}{a-b}}$
139	$\sqrt[3]{\frac{x^3}{x^2+y^2+2xy}} \cdot \sqrt{\frac{x^2-y^2}{x^2}}$	$\sqrt[6]{\frac{(x-y)^3}{x+y}}$
140	$\sqrt{\frac{a^2+2a+4}{a-3}} \cdot \sqrt{\frac{a-2}{a^3-8}} \cdot \sqrt{\frac{1}{a-3}}$	$\frac{1}{a-3}$
141	$\sqrt[3]{x^3-xy^2} \cdot \sqrt[4]{\frac{y^2}{x^3-2x^2y+xy^2}} \cdot \sqrt[6]{\frac{x-y}{y^4+xy^3}}$	$\sqrt[12]{x(x+y)^2}$
142	$\sqrt[3]{\frac{a^2+ab}{ab-b^2}} \cdot \sqrt[4]{\frac{b}{a}} \cdot \sqrt[6]{\frac{a-b}{a+b}} \cdot \sqrt[12]{\frac{b(a-b)^2}{a(a+b)^2}}$	1
143	$\left(\sqrt{\frac{x+y}{x-y}} + \sqrt{\frac{x-y}{x+y}}\right) \cdot \sqrt{\frac{x+y}{x-y}}$	$\frac{2x}{x+y}$

divisioni tra radicali

144	$\sqrt{32} : \sqrt{2}$	4
145	$\sqrt{27} : \sqrt{3}$	3
146	$\sqrt[3]{4} : \sqrt[3]{8}$	$\sqrt[3]{\frac{1}{2}}$

147	$\sqrt[3]{32}:\sqrt[3]{4}$	2
148	$\sqrt[3]{27}:\sqrt[3]{12}$	$\sqrt[3]{\frac{9}{4}}$
149	$\sqrt[4]{54}:\sqrt[3]{36}$	$\sqrt[12]{\frac{3}{32}}$
150	$\sqrt[3]{t^5}:\sqrt[3]{t}$	$\sqrt[3]{t^4}$
151	$\sqrt{ab}:\sqrt{a^2b^3}$	$\sqrt{\frac{1}{ab^2}}$
152	$\sqrt{a^2b^3}:\sqrt{ab}$	$\sqrt{ab^2}$
153	$\sqrt[4]{x^9y^6}:\sqrt[4]{x^5y^2}$	xy
154	$\sqrt[3]{ab}:\sqrt[3]{a^4b^5}$	$\sqrt[3]{\frac{1}{a^3b^4}}$
155	$\sqrt{8a^2b^3}:\sqrt{2a^2b}$	$2b$
156	$\sqrt[3]{\frac{x}{y}}:\sqrt[3]{\frac{x^2}{y^3}}$	$\sqrt[3]{\frac{y^2}{x}}$
157	$\frac{\sqrt[4]{t^3}}{\sqrt[4]{t}}$	$\sqrt{t}$

158	$\sqrt[5]{\frac{a+b}{x}} : \sqrt[5]{\frac{a+b}{x^2}}$	$\sqrt[5]{x}$
159	$\sqrt[4]{12} : \sqrt{2}$	$\sqrt[4]{3}$
160	$\sqrt[3]{2} : \sqrt{3}$	$\sqrt[6]{\frac{4}{27}}$
161	$\sqrt{5} : \sqrt[10]{5}$	$\sqrt[5]{25}$
162	$\sqrt[3]{9} : \sqrt{3}$	$\sqrt[6]{3}$
163	$\sqrt[6]{a^5b^7} : \sqrt{ab}$	$\sqrt[3]{ab^2}$
164	$\sqrt[6]{a^5b^8} : \sqrt[3]{ab}$	$\sqrt{ab^2}$
165	$\sqrt[3]{\frac{a^5}{b}} : \sqrt{\frac{a^5}{b}}$	$\sqrt[3]{\frac{b}{a^5}}$
166	$\sqrt{\frac{ab}{x}} : \sqrt[3]{\frac{ab^2}{x^2}}$	$\sqrt[6]{\frac{ax}{b}}$
167	$\sqrt[4]{\frac{x^2y}{ab^3}} : \sqrt[6]{\frac{xy^2}{a^2b}}$	$\sqrt[12]{\frac{ax^4}{b^7y}}$
168	$\sqrt[4]{\frac{2a^2}{a^2-b^2}} : \sqrt{\frac{2a}{a-b}}$	$\sqrt[4]{\frac{a-b}{2(a+b)}}$

169	$\sqrt[4]{\frac{1}{x^2}-\frac{1}{y^2}}:\sqrt{\frac{1}{x}-\frac{1}{y}}$	$\sqrt[4]{\frac{y+x}{y-x}}$
170	$\sqrt{\frac{x^2-1}{2}}:\sqrt[3]{\frac{x+1}{2}}$	$\sqrt[6]{\frac{(x+1)(x-1)^3}{2}}$
171	$\frac{\sqrt[6]{32}\cdot\sqrt[9]{16}}{\sqrt[4]{128}}$	$\sqrt[36]{\frac{1}{2^{17}}}$
172	$\left(\sqrt{t}\cdot\sqrt[3]{t^2}\right):\left(\sqrt[6]{t}\cdot\sqrt[3]{t}\right)$	$\sqrt[3]{t^2}$
173	$\left(\sqrt{\frac{x^2y}{z}}\cdot\sqrt{\frac{xy^2}{z}}\right):\left(\sqrt[3]{\frac{x^2y}{z}}\cdot\sqrt{\frac{xy^2}{z}}\right)$	$\sqrt[6]{\frac{x^2y}{z}}$
174	$\sqrt[4]{\frac{x^2-1}{x}}\cdot\sqrt[3]{\frac{3x-3}{6x^2}}:\sqrt[6]{\frac{(x-1)^4}{4x^4}}$	$\sqrt[12]{\frac{(x+1)^3}{x^3(x-1)}}$

trasportare fuori dal segno di radice i fattori possibili

175	$\sqrt{8}$	$2\sqrt{2}$
176	$\sqrt{20}$	$2\sqrt{5}$
177	$\sqrt[3]{81}$	$\sqrt[3]{3}$
178	$\sqrt[3]{32}$	$2\sqrt[3]{4}$
179	$\sqrt{50}$	$5\sqrt{2}$

180	$\sqrt{180}$	$6\sqrt{5}$
181	$\sqrt[4]{96}$	$2\sqrt[4]{6}$
182	$\sqrt{\frac{8}{81}}$	$\frac{2}{9}\sqrt{2}$
183	$\sqrt{\frac{27}{25}}$	$\frac{3}{5}\sqrt{3}$
184	$\sqrt[3]{\frac{81}{14}}$	$\frac{3}{2}\sqrt[3]{\frac{3}{2}}$
185	$\sqrt[4]{\frac{39}{16}}$	$\frac{1}{2}\sqrt[4]{39}$
186	$\sqrt[3]{a^4b^5c}$	$ab\sqrt[3]{a\,b^2c}$
187	$\sqrt[3]{a^4b^5c^6}$	$abc\sqrt[3]{ab^2}$
188	$\sqrt[4]{\frac{a^6b}{c^9}}$	$\frac{a}{c^2}\sqrt[4]{\frac{a^2b}{c}}$
189	$\sqrt{\frac{49a}{27b^3}}$	$\frac{7}{3b}\sqrt{\frac{a}{b}}$
190	$\sqrt{4x^4-4x^2}$	$2x\sqrt[2]{x^2-1}$
191	$\sqrt[5]{x^6y^8z^{11}t^{23}}$	$xy\,z^2t^4\sqrt[5]{x\,y^3z\,t^3}$

192	$\sqrt[5]{\dfrac{128\,a^{12}\,b^{9}}{c^{15}\,d^{17}}}$	$\dfrac{2a^2b}{c^3d^3}\sqrt[5]{\dfrac{4a^2b^4}{d^2}}$
193	$\sqrt{a^3-2a^2+a}$	$(a-1)\sqrt{a}$
194	$\dfrac{1}{2}\sqrt[4]{\dfrac{x^{36}\,y^{71}\,z^{25}}{64\,a^{19}\,b^{13}\,c^{50}}}$	$\dfrac{x^9y^{17}z^6}{4a^4b^3c^{12}}\sqrt[4]{\dfrac{y^3\,z}{4a^3b\,c^2}}$
195	$\sqrt[5]{\dfrac{n^3\,m^{10}\,l^8}{(l-1)^{20}}}$	$\dfrac{m^2\,l}{(l-1)^4}\sqrt[5]{n^3\,l^3}$
196	$\sqrt[3]{\dfrac{(e^3+3e^2+3e+1)\,i^7}{c^4t^2}}$	$\dfrac{(e+1)\,i^2}{c}\sqrt[3]{\dfrac{i}{c\,t^2}}$
197	$\sqrt[4]{\dfrac{64}{a^5b^6}-\dfrac{16}{a^7b^4}}$	$\dfrac{2}{ab}\sqrt[4]{\dfrac{4a^2-b^2}{a^3b^2}}$
198	$\sqrt[3]{243x^7y^6-243x^8y^5}$	$3x^2y\sqrt[3]{9\,x\,y^2(y-x)}$
199	$\sqrt[2]{\dfrac{(a-b)^6\,a^8\,b^9}{32(2a-3b)^7}}$	$\dfrac{(a-b)^3a^4b^4}{4(2a-3b)^3}\sqrt{\dfrac{b}{2(2a-b)}}$
200	$\sqrt{\dfrac{a^3x^2+a^3y^2-2a^3x\,y}{4b^5x^2+4b^5y^2+8b^5x\,y}}$	$\dfrac{a(x-y)}{2b^2(x+y)}\sqrt{\dfrac{a}{b}}$
201	$\sqrt[n]{2^{n+2}\,b^{n+1}\,a^{3n}}$	$2a^3b\sqrt[n]{4b}$
202	$\sqrt[t+1]{\dfrac{w^t\,k^{2t+2}\,s^{3t+3}}{5^{t+2}\,r^{t^2-1}}}$	$\dfrac{k^2\,s^3}{5\,r^{t-1}}\sqrt[t+1]{\dfrac{w^t}{5}}$

trasportare sotto il segno di radice i fattori esterni

203	$3\sqrt{2}$	$\sqrt{18}$

204	$2\sqrt{3}$	$\sqrt{12}$
205	$3\sqrt[3]{2}$	$\sqrt[3]{54}$
206	$2\sqrt[3]{3}$	$\sqrt[3]{24}$
207	$\left(\frac{3}{2}-1\right)\sqrt{\frac{8}{5}}$	$\sqrt{\frac{2}{5}}$
208	$\frac{2}{3}\ \sqrt[3]{\frac{2}{3}}$	$\sqrt[3]{\frac{16}{81}}$
209	$x^2y^3\sqrt{x^3y^2}$	$\sqrt{x^7y^8}$
210	$\left(\sqrt{2}+\sqrt{3}\right)\sqrt{5-2\sqrt{6}}$	1
211	$(a-b)^2\ c^3\ \sqrt[5]{(a-b)c^2}$	$\sqrt[5]{(a-b)^{11}\ c^{17}}$
212	$\frac{a^2\ b}{c^3}\ \sqrt[4]{\frac{3a^2c^{11}}{b^4}}$	$\sqrt[4]{\frac{3a^{10}}{c}}$
213	$\frac{x-y}{3}\ \sqrt[3]{\frac{9}{x^2-2xy+y^2}}$	$\sqrt[3]{\frac{x-y}{3}}$
214	$\frac{a-b}{ab}\ \sqrt{\frac{ab}{a^2-b^2}}$	$\sqrt{\frac{a-b}{ab(a+b)}}$
215	$\frac{1}{(4-x)(y-3)}\ \sqrt{(x-4)(y-3)}$	$-\sqrt{\frac{1}{(x-4)(y-3)}}$

216	$a^{2n}\ b^{n+1}\ c\ \sqrt[3]{\frac{a^6c^n}{b^{3n}}}$	$\sqrt[3]{a^{6(n+1)}\ b^3c^{n+3}}$
217	$\frac{\pi}{e}\ \sqrt[n]{\frac{e^{n+1}}{\pi^{n-1}}}$	$\sqrt[n]{e\ \pi}$
218	$\frac{a^2-b^2}{x^2y^4-x^4y^2}\ \sqrt[3]{\frac{x^6y^8(y+x)^3}{(a-b)^4(a+b)^3}}$	$\sqrt[3]{\frac{y^2}{(a-b)(y-x)^3}}$

potenza di radicali

219	$\left(\sqrt{3}\right)^2$	3
220	$\left(\sqrt{2}\right)^3$	$2\sqrt{2}$
221	$\left(\sqrt[3]{2}\right)^2$	$\sqrt[3]{4}$
222	$\left(\sqrt[4]{2}\right)^3$	$\sqrt[4]{8}$
223	$\left(\sqrt[4]{4}\right)^3$	$2\sqrt{2}$
224	$\left(\sqrt[3]{81}\right)^2$	$9\sqrt[3]{9}$
225	$\left(\sqrt{\frac{3}{4}}\right)^2$	$\frac{3}{4}$
226	$\left(\sqrt[3]{\frac{3}{4}}\right)^2$	$\frac{1}{2}\sqrt[3]{\frac{9}{2}}$
227	$\left(\sqrt[4]{12}\right)^3$	$2\sqrt[4]{4\cdot 3^3}$

228	$\left(\sqrt[3]{ab^2}\right)^2$	$b\sqrt[3]{ab}$
229	$\left(\sqrt[3]{\frac{a^2}{b}}\right)^8$	$\frac{a^5}{b^2}\sqrt[3]{\frac{a}{b^2}}$
230	$\left(\sqrt{a^2b^3\,c}\right)^3$	$a^3b^4c\,\sqrt{bc}$
231	$\left(\sqrt[3]{\frac{x^2\,y}{4}}\right)^2$	$\frac{x}{2}\sqrt[3]{\frac{x\,y^2}{2}}$
232	$\left(\frac{2}{5}\sqrt{\frac{75}{8}}\right)^4$	$\frac{9}{4}$
233	$\left(\sqrt[4]{\frac{27a^3b\,c^2}{x^4y^5}}\right)^2$	$\frac{3ac}{x^2y^2}\sqrt{\frac{3ab}{y}}$
234	$\left(\sqrt[5]{\frac{(7-y)}{2}}\right)^5$	$\frac{7-y}{2}$
235	$\left(\sqrt[mn]{6x^2\,y}\right)^{m^2}$	$\sqrt[n]{6^m\,x^{2m}\,y^m}$
236	$\left(\sqrt{x-y}\right)^3$	$(x-y)\sqrt{x-y}$
237	$\left(\sqrt[3]{1+ab}\right)^6$	$(1+ab)^2$
238	$\left(\sqrt[n]{5^{n-1}\,e}\right)^{2n}$	$e^2\,25^{n-1}$

239	$\left(\sqrt[10]{\frac{(x+y)^4}{(t-v)^3}}\right)^{15}$	$\frac{(x+y)^6}{(t-v)^4}\sqrt{\frac{1}{t-v}}$
240	$\left(\sqrt[4]{(2a-3)^2\,(2a+3)^3\,x^7\,y^5}\right)^{12}$	$(2a-3)^6(2a+3)^9x^{21}y^{15}$
241	$\left(\sqrt[3]{\frac{x^4y^2z^3}{(a-b)^4\,u^5}}\right)^4$	$\frac{x^5y^2z^4}{(a-b)^5u^6}\sqrt[3]{\frac{x\,y^2}{(a-b)u^2}}$
242	$\left(\sqrt{\sqrt{3}+\sqrt{5}}\right)^4$	$2(4+\sqrt{15})$

ridurre ad un'unica radice i seguenti radicali e trasportare fuori il segno di radice se possibile

243	$\sqrt{\sqrt{2}}$	$\sqrt[4]{2}$
244	$\sqrt[3]{\sqrt{3}}$	$\sqrt[6]{3}$
245	$\sqrt{\sqrt[3]{4}}$	$\sqrt[3]{2}$
246	$\sqrt[4]{\sqrt[3]{9}}$	$\sqrt[6]{3}$
247	$\sqrt[3]{\sqrt{8}}$	$\sqrt{2}$
248	$\sqrt{2\sqrt{2}}$	$\sqrt[4]{8}$
249	$\sqrt[3]{3\sqrt{2}}$	$\sqrt[6]{18}$
250	$\sqrt[3]{2\sqrt{3}}$	$\sqrt[6]{12}$
251	$\sqrt{3\sqrt[3]{2}}$	$\sqrt[6]{54}$

252	$\sqrt{2\sqrt[3]{3}}$	$\sqrt[6]{24}$
253	$\sqrt[3]{\frac{2}{3}\sqrt{\frac{3}{2}}}$	$\sqrt[6]{\frac{2}{3}}$
254	$\sqrt{\frac{2}{3}\sqrt[3]{\frac{3}{2}}}$	$\sqrt[3]{\frac{2}{3}}$
255	$\sqrt[3]{\sqrt{2a}}$	$\sqrt[6]{2a}$
256	$\sqrt[4]{\sqrt[3]{\frac{5xy}{z}}}$	$\sqrt[12]{\frac{5xy}{z}}$
257	$\sqrt[5]{\sqrt[3]{25(x+z)}}$	$\sqrt[15]{25(x+z)}$
258	$\sqrt[3]{\sqrt[4]{x^{17}y^{36}}}$	$xy^3\sqrt[12]{x^5}$
259	$\sqrt{\frac{1}{2}\sqrt[3]{4\sqrt{\frac{1}{4}}}}$	$\sqrt[3]{\frac{1}{2}}$
260	$\sqrt{\sqrt{a^8b^7c^6}}$	$a^2b\,c\sqrt[4]{b^3c^2}$
261	$\sqrt[5]{z^2\sqrt[7]{z^3}}$	$\sqrt[35]{z^{17}}$
262	$\sqrt{a^2b^3\sqrt[3]{a^3b^2}}$	$ab\sqrt[6]{a^3b^5}$

263	$\sqrt[3]{\sqrt{x}}$	$\sqrt[6]{x}$
264	$\sqrt[5]{x\sqrt{x}}$	$\sqrt[10]{x^3}$
265	$\sqrt[4]{\frac{a-b}{bc}\sqrt{\frac{b^3c}{a-b}}}$	$\sqrt[8]{\frac{b(a-b)}{c}}$
266	$\sqrt{x^2y^2\sqrt{\frac{1}{x^2y^2}\sqrt{xy}}}$	$\sqrt[8]{x^5y^5}$
267	$\sqrt[3]{(x+y)\sqrt[3]{\frac{(x-y)}{(x+y)^2}}};$	$\sqrt[9]{x^2-y^2}$
268	$\sqrt[n+1]{\sqrt[n-1]{a^{n^2-1}}}$	a
269	$\sqrt[3]{(a+b)^2\sqrt{(a+b)\sqrt[3]{(a+b)}}}$	$\sqrt[9]{(a+b)^8}$

somma algebrica di radicali

270	$\sqrt[4]{2}+\sqrt[4]{2}$	$2\sqrt[4]{2}$
271	$5\sqrt{5}-\sqrt{5}$	$4\sqrt{5}$
272	$\sqrt[3]{2}-3\sqrt[3]{2}$	$-2\sqrt[3]{2}$
273	$10\sqrt{2}-5\sqrt{2}$	$5\sqrt{2}$
274	$5\sqrt{3}-3\sqrt{3}$	$2\sqrt{2}$

275	$3\sqrt[3]{3}-7\sqrt[3]{3}$	$-4\sqrt[3]{3}$
276	$8\sqrt{5}-3\sqrt{5}-5\sqrt{5}$	0
277	$6\sqrt[4]{6}+8\sqrt[4]{6}-13\sqrt[4]{6}$	$\sqrt[4]{6}$
278	$3\sqrt{5}-2\sqrt{5}-5\sqrt{5}+10\sqrt{2}$	$-4\sqrt{5}+10\sqrt{2}$
279	$3\sqrt{2}-6(\sqrt{2}+\sqrt{3})+5\sqrt{3}$	$-(3\sqrt{2}+\sqrt{3})$
280	$2(\sqrt{5}+\sqrt{3})-8\sqrt{5}-2\sqrt{3}+7\sqrt{5}$	$\sqrt{5}$
281	$3\sqrt{2}+4\sqrt{8}-\sqrt{50}$	$6\sqrt{2}$
282	$2\sqrt{27}-5\sqrt{48}+3\sqrt{75}$	$\sqrt{3}$
283	$3\sqrt{75}+2\sqrt{12}-3\sqrt{48}-7\sqrt{3}$	0
284	$2\sqrt{63}+4\sqrt{12}-2\sqrt{28}-\sqrt{27}$	$2\sqrt{7}+5\sqrt{3}$
285	$\frac{3}{4}\sqrt{\frac{45}{2}}+\frac{1}{3}\sqrt{\frac{125}{2}}-\frac{2}{5}\sqrt{\frac{490}{4}}$	$\frac{67}{60}\sqrt{\frac{5}{2}}$
286	$\sqrt[3]{16}+\sqrt[3]{54}-\sqrt[3]{250}$	0
287	$\sqrt[3]{128}+\sqrt[3]{16}-3\sqrt[3]{250}-\sqrt[3]{54}$	$-12\sqrt[3]{2}$
288	$\sqrt{72}-\sqrt{18}+\sqrt{12}-\sqrt{48}+\sqrt{2}$	$2(2\sqrt{2}-\sqrt{3})$

289	$\sqrt[3]{243}-2\sqrt{125}-\sqrt[3]{72}+3\sqrt{45}+2\sqrt[3]{9}-\sqrt{20}$	$3\sqrt[3]{9}-3\sqrt{5}$
290	$\frac{3}{4}\sqrt[3]{\frac{1}{2}}+\frac{1}{2}\sqrt[3]{\frac{54}{4}}-\frac{2}{5}\sqrt[3]{\frac{125}{16}}$	$\frac{5}{4}\sqrt[3]{\frac{1}{2}}$
291	$3\sqrt{a}-5\sqrt{a}+2\sqrt{a}$	0
292	$a\sqrt{x}-4x\sqrt{a}+2a\sqrt{x}+x\sqrt{a}$	$3a\sqrt{x}-3x\sqrt{a}$
293	$a\sqrt{b}+5\sqrt{a}-2\sqrt{b}-b\sqrt{a}$	$(5-b)\sqrt{a}+(a-2)\sqrt{b}$
294	$3a\sqrt[3]{a}-7a\sqrt[3]{2a}+5a\sqrt[3]{a}+5a\sqrt[3]{2a}$	$8a\sqrt[3]{a}-2a\sqrt[3]{2a}$
295	$\frac{1}{2}\sqrt[3]{a^2b}+3\sqrt[3]{a^5b}-\frac{1}{3}\sqrt[3]{a^5b}-\frac{3}{4}\sqrt[6]{a^4b^2}$	$\frac{8}{3}a\sqrt[3]{a^2b}-\frac{1}{4}\sqrt[3]{a^2b}$
296	$2\sqrt{a}+\frac{1}{2}(\sqrt{a}-\sqrt{b})+4(\sqrt{b}+2\sqrt{a})+\frac{3}{2}(\sqrt{a}+\sqrt{b})$	$12\sqrt{a}+5\sqrt{b}$
297	$5\sqrt[3]{a-b}+(x-2)\sqrt[5]{a+b}+4(\sqrt{ab}-\sqrt[3]{a-b})-4\sqrt{ab}+2\sqrt[5]{a+b}$	$\sqrt[3]{a-b}+x\sqrt[5]{a+b}$
298	$5\left(\sqrt{ab^2}-\sqrt[3]{a^2b}\right)-8\sqrt{ab^2}+3-6\left(\sqrt[3]{a^2b}+1+\sqrt{a}\right)+3\sqrt{a}$	$-3\left(\sqrt{ab^2}+\sqrt{a}+1\right)-11\sqrt[3]{a^2b}$
299	$\sqrt{a^3+3a^2b+3ab^2+b^3}-\sqrt{a^3+a^2b}+\frac{1}{2}\sqrt{4ab^2+4b^3}-2b\sqrt[4]{a^2+2ab+b^2}$	0
300	$2a-\frac{1}{2}\sqrt[3]{128a^5}-\frac{2}{3}\sqrt[3]{27a^3}+\sqrt[3]{2a^2}+\sqrt[3]{54a^2x^3}+\sqrt[3]{16a^5}$	$(1+3x)\sqrt[3]{2a^2}$

prodotti notevoli tra radicali

301	$(\sqrt{7}-2)(\sqrt{7}+2)$	3

302	$(3\sqrt{5}-4\sqrt{2})(3\sqrt{5}+4\sqrt{2})$	13
303	$(\sqrt{a}+2\sqrt{b})^2$	$a+4b+4\sqrt{ab}$
304	$(\sqrt{11}-\sqrt{3})^2$	$2(7-\sqrt{33})$
305	$\left(\sqrt{x}+\frac{1}{\sqrt{x}}\right)^2$	$\frac{(x+1)^2}{x}$
306	$(\sqrt[4]{x}-3\sqrt[6]{y})^2$	$\sqrt{x}+9\sqrt[3]{y}-6\sqrt[12]{x^3y^2}$
307	$(3+\sqrt{5})^2$	$14+6\sqrt{5}$
308	$(\sqrt{7}-2\sqrt{3})^2$	$19-4\sqrt{21}$
309	$(a\sqrt{b}-c\sqrt{d})(a\sqrt{b}+c\sqrt{d})$	$a^2\,b-c^2\,d$
310	$\left(\frac{1}{2}\sqrt{2x}-\frac{2}{3}\sqrt{x}\right)\left(\frac{1}{2}\sqrt{2x}+\frac{2}{3}\sqrt{x}\right)$	$\frac{x}{18}$
311	$(\sqrt{5}-\sqrt{3}+\sqrt{2})^2$	$10-2\sqrt{15}+2\sqrt{10}-2\sqrt{6}$
312	$(\sqrt{x}+3)^3$	$x\sqrt{x}+27+9x+27\sqrt{x}$
313	$(2\sqrt[3]{a}-3\sqrt[6]{b})^3$	$8a-27\sqrt{b}-36\sqrt[6]{a^4b}+54\sqrt[3]{ab}$
	razionalizzazione dei denominatori di frazioni	
314	$\frac{2}{\sqrt{2}}$	$\sqrt{2}$
315	$\frac{7}{\sqrt{7}}$	$\sqrt{7}$

316	$\frac{1}{\sqrt{5}}$	$\frac{\sqrt{5}}{5}$
317	$\frac{5}{\sqrt{3}}$	$\frac{5\sqrt{3}}{3}$
318	$\frac{8}{\sqrt{2}}$	$4\sqrt{2}$
319	$\frac{6}{\sqrt{2}}$	$3\sqrt{2}$
320	$\frac{5}{2\sqrt{3}}$	$\frac{5\sqrt{3}}{6}$
321	$\frac{5}{2\sqrt{5}}$	$\frac{\sqrt{5}}{2}$
322	$\frac{15}{\sqrt{5}}$	$3\sqrt{5}$
323	$\frac{2}{\sqrt{12}}$	$\frac{\sqrt{3}}{3}$
324	$\frac{2\sqrt{7}}{\sqrt{20}}$	$\frac{\sqrt{35}}{5}$
325	$\frac{2\sqrt{3}}{\sqrt{18}}$	$\frac{\sqrt{6}}{3}$
326	$\frac{8\sqrt{5}}{3\sqrt{28}}$	$\frac{4\sqrt{35}}{21}$
327	$\frac{2\sqrt{15}}{3\sqrt{75}}$	$\frac{2\sqrt{5}}{15}$
328	$\frac{\sqrt[3]{3}}{\sqrt{5}}$	$\frac{\sqrt[6]{1125}}{5}$
329	$\frac{\sqrt{5}-\sqrt{3}}{3\sqrt{2}}$	$\frac{\sqrt{10}-\sqrt{6}}{6}$

330	$\frac{2\sqrt{2}-3\sqrt{5}}{2\sqrt{3}}$	$\frac{2\sqrt{6}-3\sqrt{15}}{6}$
331	$\frac{2\sqrt{40}-3\sqrt{8}-\sqrt{5}}{6\sqrt{12}}$	$\frac{\sqrt{3}(4\sqrt{10}-6\sqrt{2}-\sqrt{5})}{36}$
332	$\frac{\sqrt{50}+\sqrt{12}-3\sqrt{2}}{4\sqrt{8}}$	$\frac{\sqrt{2}(\sqrt{3}+\sqrt{2})}{8}$
333	$\frac{x}{\sqrt{x}}$	$\sqrt{x}$
334	$\frac{7y}{\sqrt{y}}$	$7\sqrt{y}$
335	$\frac{2}{\sqrt{a}}$	$\frac{2\sqrt{a}}{a}$
336	$\frac{a}{2\sqrt{a}}$	$\frac{\sqrt{a}}{2}$
337	$\frac{3}{\sqrt{a^3}}$	$\frac{3\sqrt{a}}{a^2}$
338	$\frac{3}{5\sqrt{ab}}$	$\frac{3\sqrt{ab}}{5ab}$
339	$\frac{xy}{\sqrt{2xy}}$	$\frac{\sqrt{2xy}}{2}$
340	$\frac{x^4y^6}{\sqrt{xy}}$	$x^3y^5\sqrt{xy}$
341	$\frac{4a\sqrt[3]{ab}}{\sqrt{b}}$	$\frac{4a\sqrt[6]{a^2b^5}}{b}$
342	$\frac{a^2-b^2}{\sqrt{a+b}}$	$(a-b)\sqrt{a+b}$
343	$\frac{a+b}{\sqrt{a^2-b^3}}$	$\frac{(a+b)\sqrt{a^2-b^3}}{a^2-b^3}$

344	$\frac{a+5}{\sqrt{a+5}}$	$\sqrt{a+5}$
345	$\frac{\sqrt{x}-\sqrt{y}}{\sqrt{y}}$	$\frac{\sqrt{xy}}{y}-1$
346	$\frac{x-y}{\sqrt{x^2-y^2}}$	$\frac{\sqrt{x^2-y^2}}{x+y}$
347	$\frac{x^2+2x+1}{\sqrt{x+1}}$	$(x+1)\sqrt{x+1}$
348	$\frac{x^3-8}{\sqrt{x-2}}$	$(x^2+2x+4)\sqrt{x-2}$
349	$\frac{a+b}{\sqrt{a^2+b^2}}$	$\frac{(a+b)\sqrt{a^2+b^2}}{a^2+b^2}$
350	$\frac{a+b}{\sqrt{a^2-b^2}}$	$\frac{\sqrt{a^2-b^2}}{a-b}$
351	$\frac{2}{\sqrt[3]{4}}$	$\sqrt[3]{2}$
352	$\frac{2}{3\sqrt[5]{8}}$	$\frac{\sqrt[5]{4}}{3}$
353	$\frac{\sqrt{x^3}\ \sqrt[14]{x^5}}{x\sqrt[7]{x^6}}$	1
354	$\frac{4\sqrt{3}}{\sqrt[7]{9}}$	$4\sqrt[14]{27}$
355	$\frac{3\sqrt{2}}{4\sqrt[3]{2}}$	$\frac{3\sqrt[6]{2}}{4}$
356	$\frac{12}{7\sqrt[6]{18}}$	$\frac{2\sqrt[6]{2592}}{7}$

357	$\frac{x}{\sqrt[4]{xy^2}}$	$\frac{\sqrt[4]{x^3y^2}}{y}$
358	$\frac{6}{5\sqrt[3]{a^2b}}$	$\frac{6\sqrt[3]{ab^2}}{5ab}$
359	$\frac{8abc}{3\sqrt[4]{a^3b^2c}}$	$\frac{8\sqrt[4]{ab^2c^3}}{3}$
360	$\frac{xy^3z}{\sqrt[5]{x^2y^7z}}$	$y\sqrt[5]{x^3y^3z^4}$
361	$\frac{3ax}{2b\sqrt[5]{a^3x}}$	$\frac{3\sqrt[5]{a^2x^4}}{2b}$
362	$\frac{a^2bxy^3}{\sqrt[6]{a^5x\,y^3}}$	$aby^2\sqrt[6]{ax^5y^3}$
363	$\frac{b}{y\sqrt[5]{b^3}}$	$\frac{\sqrt[5]{b^2}}{y}$
364	$\frac{4xy-4y^2}{2\sqrt[3]{x^2-2xy+y^2}}$	$2y\sqrt[3]{x-y}$
365	$\frac{a^2b}{x\sqrt[3]{abx^2}}$	$\frac{a\sqrt[3]{a^2b^2x}}{x^2}$
366	$\frac{4x^2y\,(x-y)}{\sqrt[3]{16x^4y^2(x-y)^2}}$	$\sqrt[3]{4x^2\,y\,(x-y)}$
367	$\frac{x^3-y^3}{(x^2+xy+y^2)\sqrt[4]{x-y}}$	$\sqrt[4]{(x-y)^3}$
368	$\frac{a+b}{\sqrt[5]{a^2+2ab+b^2}}$	$\sqrt[5]{(a+b)^3}$
369	$\frac{(x+y)^2}{\sqrt[4]{x+y}}$	$(x+y)\sqrt[4]{(x+y)^3}$

370	$\dfrac{a^2-1}{\sqrt[3]{(a^2-2a+1)^2}}$	$\dfrac{(a+1)\sqrt[3]{(a-1)^2}}{a-1}$
371	$\dfrac{a^2-b^2}{\sqrt[3]{a+b}}$	$(a-b)\sqrt[3]{(a+b)^2}$
372	$\dfrac{\sqrt{xy}+\sqrt[3]{xy^2}}{\sqrt[3]{x}\sqrt{y}}$	$\sqrt[6]{x}+\sqrt[6]{y}$
373	$\dfrac{12}{\sqrt{7}+1}$	$2(\sqrt{7}-1)$
374	$\dfrac{5}{4-\sqrt{5}}$	$\dfrac{5(4+\sqrt{5})}{11}$
375	$\dfrac{6}{2+\sqrt{2}}$	$3(2-\sqrt{2})$
376	$\dfrac{3\sqrt{3}}{\sqrt{3}-3}$	$-\dfrac{3(\sqrt{3}+1)}{2}$
377	$\dfrac{\sqrt{7}+2}{\sqrt{7}-2}$	$\dfrac{11+4\sqrt{7}}{3}$
378	$\dfrac{2}{\sqrt{3}+\sqrt{2}}$	$2(\sqrt{3}-\sqrt{2})$
379	$\dfrac{6}{\sqrt{6}-\sqrt{2}}$	$\dfrac{3\sqrt{2}(\sqrt{3}+1)}{2}$
380	$\dfrac{12}{\sqrt{3}-\sqrt{2}}$	$12(\sqrt{3}+\sqrt{2})$
381	$\dfrac{\sqrt{7}+2\sqrt{3}}{19+4\sqrt{21}}$	$\dfrac{2\sqrt{3}-\sqrt{7}}{5}$
382	$\dfrac{1}{3\sqrt{3}-2\sqrt{2}}$	$\dfrac{3\sqrt{3}+2\sqrt{2}}{19}$
383	$\dfrac{1}{3\sqrt{2}+2\sqrt{3}}$	$\dfrac{3\sqrt{2}-2\sqrt{3}}{6}$

384	$\frac{a-b}{b-\sqrt{ab}}$	$-\frac{b+\sqrt{ab}}{b}$
385	$\frac{\sqrt{a}-a\sqrt{a}}{1-\sqrt{a}}$	$\sqrt{a}+a$
386	$\frac{\sqrt{a}-\sqrt{2}}{\sqrt{a}+\sqrt{2}}$	$\frac{a+2-2\sqrt{2a}}{a-2}$
387	$\frac{a-b}{\sqrt{a}-\sqrt{b}}$	$\sqrt{a}+\sqrt{b}$
388	$\frac{\sqrt{x}-\sqrt{y}}{\sqrt{x}+\sqrt{y}}$	$\frac{x+y-2\sqrt{xy}}{x-y}$
389	$\frac{8}{\sqrt{2a}+2b}$	$\frac{4(\sqrt{2a}-2b)}{a-2b^2}$
390	$\frac{\sqrt{x}}{\sqrt{x}-2\sqrt{y}}$	$\frac{x+2\sqrt{xy}}{x-4y}$
391	$\frac{a-2}{2\sqrt{a}-a\sqrt{2}}$	$-\frac{2\sqrt{a}+a\sqrt{2}}{2a}$
392	$\frac{a+2\sqrt{ab}+b}{\sqrt{a}+\sqrt{b}}$	$\sqrt{a}+\sqrt{b}$
393	$\frac{a-5\sqrt{a}+b}{\sqrt{a}-2}$	$\frac{\sqrt{a}(a-10+b)-3a+2b}{a-4}$
394	$\frac{3ab}{\sqrt{3a}-\sqrt{ab}}$	$\frac{3b(\sqrt{3a}+\sqrt{ab})}{3-b}$
395	$\frac{x^2-2xy+y^2}{\sqrt{x}-\sqrt{y}}$	$(x-y)(\sqrt{x}+\sqrt{y})$
396	$\frac{ab}{(\sqrt{a-b}+\sqrt{a+b})}$	$\frac{-a(\sqrt{a-b}-\sqrt{a+b})}{2}$

397	$\frac{\sqrt{a+b}+\sqrt{a-b}}{\sqrt{a+b}-\sqrt{a-b}}$	$\frac{a+\sqrt{a^2-b^2}}{b}$
398	$\frac{a+3+2\sqrt{a+2}}{\sqrt{a+2}+1}$	$1+\sqrt{a+2}$
399	$\frac{a+1}{\sqrt{a+4}-\sqrt{3}}$	$\sqrt{a+4}+\sqrt{3}$
400	$\frac{3b+3}{\sqrt{2b+3}-\sqrt{b+2}}$	$3\left(\sqrt{2b+3}+\sqrt{b+2}\right)$
401	$\frac{\sqrt{ab}}{\sqrt{a^2b^3}+\sqrt{a^5b}}$	$\frac{b\sqrt{a}-a^2}{(b^2-a^3)a}$
402	$\frac{3\sqrt{3}}{2-\sqrt{2}+\sqrt{3}}$	$\frac{-36\sqrt{2}-15\sqrt{6}-27+6\sqrt{3}}{23}$
403	$\frac{23\sqrt{6}}{\sqrt{3}-\sqrt{2}-2}$	$9\sqrt{2}-10\sqrt{3}-2\sqrt{6}-24$
404	$\frac{3\sqrt{3}}{2-\sqrt{2}+\sqrt{3}}$	$\frac{36\sqrt{2}-15\sqrt{6}+27+6\sqrt{3}}{23}$
405	$\frac{1-\sqrt{2}}{\sqrt{2}-\sqrt{3}-\sqrt{5}}$	$\frac{2\sqrt{15}-6-\sqrt{30}+3\sqrt{2}-2\sqrt{3}+2\sqrt{6}}{12}$
406	$\frac{1}{\sqrt{3}+\sqrt{5}-\sqrt{2}}$	$\frac{\sqrt{30}-3\sqrt{2}+2\sqrt{3}}{12}$
407	$\frac{4}{\sqrt{2}-\sqrt{3}-\sqrt{6}}$	$\frac{4\left(7\sqrt{2}-5\sqrt{3}+\sqrt{6}-12\right)}{23}$
408	$\frac{3}{\sqrt{7}-\sqrt{2}+\sqrt{3}}$	$\frac{3\left(\sqrt{42}-4\sqrt{2}+3\sqrt{3}-\sqrt{7}\right)}{10}$
409	$\frac{2\sqrt{2}-\sqrt{3}}{\sqrt{2}-\sqrt{3}+\sqrt{6}}$	$-\frac{17\sqrt{6}-27\sqrt{2}+16\sqrt{3}-43}{23}$
410	$\frac{15\sqrt{2}}{\sqrt{6}+\sqrt{2}-2\sqrt{3}}$	$\frac{15\left(4+2\sqrt{3}+\sqrt{6}+3\sqrt{2}\right)}{4}$

411	$\dfrac{2}{\sqrt{3}+\sqrt{5}-\sqrt{2}}$	$\dfrac{2\sqrt{3}-3\sqrt{2}+\sqrt{30}}{6}$
412	$\dfrac{\sqrt{2}-\sqrt{3}+1}{\sqrt{3}+1+\sqrt{6}}$	$\sqrt{2}-\sqrt{3}+\sqrt{6}-2$
413	$\dfrac{2\sqrt{2}+3}{\sqrt{6}+\sqrt{3}+\sqrt{2}+2}$	$\sqrt{6}+\sqrt{3}-\sqrt{2}-2$
414	$\dfrac{1}{\sqrt{6}-\sqrt{2}+\sqrt{3}-1}$	$\dfrac{\sqrt{6}-\sqrt{3}+\sqrt{2}-1}{2}$
415	$\dfrac{\sqrt{3}}{2-\sqrt{6}-\sqrt{2}+\sqrt{3}}$	$-3\sqrt{2}-2\sqrt{3}-\sqrt{6}-3$
416	$\dfrac{1}{\sqrt[3]{3}-2}$	$-\dfrac{\sqrt[3]{9}+2\sqrt[3]{3}+4}{5}$
417	$\dfrac{\sqrt[3]{2}}{\sqrt[3]{2}-1}$	$(1+\sqrt[3]{4}+\sqrt[3]{2})\sqrt[3]{2}$
418	$\dfrac{3}{\sqrt[3]{5}-\sqrt[3]{2}}$	$\sqrt[3]{25}+\sqrt[3]{10}+\sqrt[3]{4}$
419	$\dfrac{3\sqrt[3]{2}}{\sqrt[3]{2}-1}$	$3(2+\sqrt[3]{4}+\sqrt[3]{2})$
420	$\dfrac{6}{\sqrt[3]{3}-\sqrt[3]{2}}$	$6(\sqrt[3]{9}+\sqrt[3]{6}+\sqrt[3]{4})$
421	$\dfrac{13}{2-\sqrt[4]{3}}$	$(2+\sqrt[4]{3})(4+\sqrt{3})$
422	$\dfrac{10}{2\sqrt[3]{2}-\sqrt[3]{6}}$	$4\sqrt[3]{4}+2\sqrt[3]{12}+\sqrt[3]{36}$
423	$\dfrac{19}{2\sqrt[3]{3}-\sqrt[3]{5}}$	$4\sqrt[3]{9}+2\sqrt[3]{15}+\sqrt[3]{25}$
424	$\dfrac{13}{2\sqrt[3]{3}+\sqrt[3]{2}}$	$\dfrac{4\sqrt[3]{9}-2\sqrt[3]{6}+\sqrt[3]{4}}{2}$

425	$\frac{a+b^3}{\sqrt[3]{a}+b}$	$\sqrt[3]{a^2}-b\sqrt[3]{a}+b^2$
426	$\frac{y}{\sqrt[3]{x+y}-\sqrt[3]{x}}$	$\sqrt[3]{(x+y)^2}+\sqrt[3]{x^2+xy}+\sqrt[3]{x^2}$
427	$\frac{2x}{\sqrt[3]{x+y}+\sqrt[3]{x-y}}$	$\sqrt[3]{(x+y)^2}-\sqrt[3]{x^2-y^2}+\sqrt[3]{(x-y)^2}$
428	$\frac{5x}{\sqrt[3]{5x+2}-\sqrt[3]{2}}$	$\sqrt[3]{(5x+2)^2}+\sqrt[3]{10x+4}+\sqrt[3]{4}$

trasformare i seguenti radicali doppi in somma di radicali semplici

429	$\sqrt{4-\sqrt{7}}$	$\sqrt{\frac{7}{2}}-\sqrt{\frac{1}{2}}$
430	$\sqrt{3+\sqrt{5}}$	$\sqrt{\frac{5}{2}}+\sqrt{\frac{1}{2}}$
431	$\sqrt{9-\sqrt{17}}$	$\sqrt{\frac{17}{2}}-\sqrt{\frac{1}{2}}$
432	$\sqrt{10+\sqrt{19}}$	$\sqrt{\frac{19}{2}}+\sqrt{\frac{1}{2}}$
433	$\sqrt{4-\sqrt{12}}$	$\sqrt{3}-1$
434	$\sqrt{8+\sqrt{48}}$	$\sqrt{6}+\sqrt{2}$
435	$\sqrt{5-2\sqrt{6}}$	$\sqrt{3}-\sqrt{2}$
436	$\sqrt{8-2\sqrt{15}}$	$\sqrt{5}-\sqrt{3}$
437	$\sqrt{4+2\sqrt{3}}$	$\sqrt{3}+1$

438	$\sqrt{12-2\sqrt{11}}$		$\sqrt{11}-1$
439	$\sqrt{20+\sqrt{279}}$		$\frac{\sqrt{62}}{2}+\frac{3\sqrt{2}}{2}$
440	$\sqrt{13-4\sqrt{3}}$		$2\sqrt{3}-1$
441	$\sqrt{18+3\sqrt{11}}$		$\frac{\sqrt{66}}{2}+\frac{\sqrt{6}}{2}$
442	$\sqrt{\frac{7}{6}-\frac{2}{\sqrt{3}}}$		$\frac{\sqrt{6}}{3}-\frac{\sqrt{2}}{2}$
443	$\sqrt{\frac{6}{5}-\sqrt{\frac{4}{5}}}$		$1-\frac{\sqrt{5}}{5}$
444	$\sqrt{4\sqrt{2}-2\sqrt{6}}$		$\sqrt[4]{18}-\sqrt[4]{2}$
445	$\sqrt{a+3+2\sqrt{3a}}$	$(a>0)$	$\sqrt{a}+\sqrt{3}$
446	$\sqrt{x-\sqrt{2x-1}}$	$\left(x>\frac{1}{2}\right)$	$\frac{\sqrt{2(2x-1)}}{2}-\frac{\sqrt{2}}{2}$
447	$\sqrt{(a+b)+2\sqrt{ab}}$	$(a,b\in N)$	$\sqrt{a}+\sqrt{b}$
448	$\sqrt{x+y-2\sqrt{xy}}$	$(x,y\in R^+)$	$\sqrt{x}-\sqrt{y}$

espressioni con i radicali

449	$\sqrt[3]{2}\cdot\sqrt{3}\cdot\sqrt[3]{6}\cdot\sqrt[12]{6}$		$\sqrt[12]{2^9\cdot 3^{11}}$
450	$\sqrt{72}:\sqrt{6}:\sqrt{2}$		$\sqrt{6}$

451	$\sqrt{6} : \sqrt[4]{12}$	$\sqrt[4]{3}$
452	$\frac{6}{\sqrt{3}} + \frac{5}{\sqrt{5}}$	$2\sqrt{3} + \sqrt{5}$
453	$\sqrt{\frac{5}{2}} : \sqrt{\frac{10}{27}} : \sqrt{\frac{3}{8}}$	$3\sqrt{2}$
454	$\sqrt[3]{a^2bc} \cdot \sqrt[3]{a^2b^2c^2}$	$abc\sqrt[3]{a}$
455	$\sqrt{\frac{2}{\sqrt{5}-\sqrt{3}}}$	$\sqrt{\sqrt{5}+\sqrt{3}}$
456	$\sqrt{3-\sqrt{5}} \cdot \sqrt{3+\sqrt{5}} \cdot \sqrt{6-4\sqrt{2}} \cdot \sqrt{6+4\sqrt{2}}$	4
457	$\frac{1}{3+\sqrt{3}} - \frac{1}{3-\sqrt{3}} - \sqrt{3}$	$-\frac{4\sqrt{3}}{3}$
458	$\frac{\sqrt{2}}{1-\sqrt{5}} + \frac{\sqrt{2}-3}{\sqrt{5}} - \frac{3(\sqrt{5}-1)}{\sqrt{5}-5}$	$-\frac{\sqrt{2}(\sqrt{5}+5)}{20}$
459	$\frac{3}{2+\sqrt{3}} + \frac{3}{2-\sqrt{3}} - 5$	7
460	$(1+2\sqrt{2}-3\sqrt{3})^2 - (1-\sqrt{2})^3$	$29+9\sqrt{2}-6\sqrt{3}-12\sqrt{6}$
461	$\frac{4-\sqrt{5}-(2+\sqrt{5})-(2-\sqrt{5})}{\sqrt{5}(2-\sqrt{5})(2+\sqrt{5})}$	1
462	$(\sqrt{5}-\sqrt{3}) \cdot \sqrt{4+\sqrt{15}}$	$\sqrt{2}$
463	$\sqrt{7+2\sqrt{10}} - \sqrt{7-2\sqrt{10}}$	$2\sqrt{2}$

464	$\frac{3}{4\sqrt{10}}\cdot\left(\frac{\sqrt{5}+\sqrt{2}}{\sqrt{5}-\sqrt{2}}-\frac{\sqrt{5}-\sqrt{2}}{\sqrt{5}+\sqrt{2}}\right):\sqrt{17^2-15^2}+1$	$\frac{9}{4}$
465	$\left[\left(1+\frac{\sqrt{3}}{2}\right)\cdot\left(2-\frac{7}{2+\sqrt{3}}\right):\left(1-\frac{2}{2+\sqrt{3}}\right)\right]:\frac{1}{2\sqrt{3}}$	$\frac{\sqrt{3}}{3}$
466	$\frac{1}{\sqrt{5}+\sqrt{3}}+\frac{1}{\sqrt{5}-\sqrt{3}}-\frac{3}{2}\sqrt{\frac{20}{9}}$	0
467	$\frac{-2\sqrt{2}}{(2+\sqrt{6})-(\sqrt{2}+2\sqrt{3})}$	$\sqrt{6}+\sqrt{3}+\sqrt{2}+1$
468	$\left(\frac{\sqrt{2}}{\sqrt{3}}+\frac{\sqrt{3}}{\sqrt{2}}\right)\cdot\left(\frac{\sqrt{3}}{\sqrt{5}}+\frac{\sqrt{5}}{\sqrt{3}}\right)$	$\frac{4}{3}\sqrt{10}$
469	$\left(\frac{1}{\sqrt[3]{3}}+\frac{1}{\sqrt[3]{9}}\right)\cdot\frac{6}{\sqrt[3]{3}+\sqrt[3]{9}}$	2
470	$\frac{1}{2\sqrt{5}}\cdot\left(\frac{\sqrt{5}}{\sqrt[3]{3}}-\frac{\sqrt[3]{9}}{\sqrt{5}}\right)$	$\frac{\sqrt[3]{9}}{15}$
471	$\sqrt{\frac{2\sqrt{3}-3}{\sqrt{3}}}\cdot(2-\sqrt{3})\cdot(2+\sqrt{3})$	$\frac{\sqrt{6}-\sqrt{2}}{2}$
472	$\frac{\sqrt{2-\sqrt{2}}}{\sqrt{2+\sqrt{2}}}\cdot\frac{\sqrt{3+\sqrt{7}}}{\sqrt{3-\sqrt{7}}}\cdot(3-\sqrt{7})$	$2-\sqrt{2}$
473	$\sqrt{a}:\sqrt[3]{a}$	$\sqrt[6]{a}$
474	$\sqrt[4]{a^3x^2y}:\sqrt[5]{a^2x^2y}$	$\sqrt[20]{a^7x^2y}$
475	$\left(2\sqrt{5}-5\sqrt{2}\right)^2$	$10\left(7-2\sqrt{10}\right)$
476	$\frac{\sqrt{a}}{\sqrt{a}+\sqrt{b}}+\frac{\sqrt{b}}{\sqrt{a}-\sqrt{b}}-\frac{2a}{a-b}$	-1

477	$(3\sqrt{x}-2\sqrt{y})\cdot(\sqrt{x}+\sqrt{y}+1)-(\sqrt{x}-2)\cdot(2\sqrt{x}+\sqrt{y})$	$x-2y+7\sqrt{x}$
478	$\sqrt{\dfrac{a^6\sqrt{b}}{b\sqrt[3]{a}}}$	$a^2\sqrt[12]{\dfrac{a^{10}}{b^3}}$
479	$\sqrt{a^3b}\cdot\sqrt{a^5b^7}$	a^4b^4
480	$\sqrt{x^2-1}:\sqrt{x+1}$	$\sqrt{x-1}$
481	$\dfrac{\sqrt{b}}{\sqrt{a}+\sqrt{b}}-\dfrac{\sqrt{b}}{\sqrt{a}-\sqrt{b}}+\dfrac{2a}{a-b}$	2
482	$\left(\sqrt{2-x}-\sqrt{2+x}\right)^2+\left(\sqrt{4-x^2}+1\right)^2$	$9-x^2$
483	$\left(\dfrac{\sqrt{a}}{\sqrt{b}}+\dfrac{\sqrt{b}}{\sqrt{a}}\right)\cdot\left(\dfrac{1}{\sqrt{a}}+\dfrac{1}{\sqrt{b}}\right)$	$\dfrac{(a+b)(\sqrt{a}+\sqrt{b})}{ab}$
484	$\dfrac{\sqrt{a+b}}{2\sqrt{a-b}}+\dfrac{\sqrt{a-b}}{3\sqrt{a+b}}-\dfrac{\sqrt{a+b}}{\sqrt{a-b}}$	$-\dfrac{a+5b}{6\sqrt{a^2-b^2}}$
485	$(\sqrt{x}-\sqrt{y})^2-(\sqrt{x}-1)(\sqrt{x}-\sqrt{y})+(\sqrt{y}+2)(\sqrt{x}+1)-3(y+\sqrt{x})$	$2(1-y)$
486	$\dfrac{a-1}{a\sqrt{a}+1}\cdot\left(a+\dfrac{1+a}{a}\right)$	$\dfrac{a\sqrt{a}-1}{a}$
487	$\sqrt{27x^3y}+x\sqrt{12xy}-\sqrt[6]{27x^3y^3}-4x\sqrt{3xy}+\sqrt[4]{9x^2y^2}$	$x\sqrt{3xy}$
488	$(2\sqrt{a}+3\sqrt{b}):(2\sqrt{a}-3\sqrt{b})-(12\sqrt{ab}+18b):(4a-9b)$	1
489	$\dfrac{\sqrt[4]{a}}{\sqrt[4]{a}-1}+\dfrac{\sqrt[4]{a}}{\sqrt[4]{a}+1}-\dfrac{\sqrt{a}+1}{\sqrt{a}-1}$	1
490	$\dfrac{x^2-y^2}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}}$	$(x+y)\left(\sqrt[3]{x}-\sqrt[3]{y}\right)$

491	$\sqrt{\frac{a+\sqrt{b}}{a-\sqrt{b}}}\cdot\sqrt{a^2-b}$	$a+\sqrt{b}$
492	$\left(\sqrt{ax}+\frac{ax}{a-\sqrt{ax}}\right)\cdot\left(\sqrt{ax}-\frac{ax}{a+\sqrt{ax}}\right)$	$\frac{a^2\,x}{a-x}$
493	$\frac{a\sqrt{x}-x\sqrt{a}}{\sqrt{a}-\sqrt{x}}+\frac{a\sqrt{a}}{\sqrt{a}+\sqrt{x}}+\frac{x(\sqrt{ax}-x)}{a-x}$	$a+x$
494	$\left(\sqrt[4]{a^7}-\frac{ab}{\sqrt[4]{a}}\right):\left(\sqrt[3]{a}-\frac{b}{\sqrt[3]{a^2}}\right)$	$a\sqrt[12]{a^5}$
495	$\left(\sqrt{a+b}+\frac{1}{\sqrt{a-b}}\right):\left(1+\frac{1}{\sqrt{a^2-b^2}}\right)$	$\sqrt{a+b}$
496	$\left(\sqrt{2-3x}+\frac{1}{\sqrt{2+3x}}\right):\left(1+\frac{1}{\sqrt{4-9x^2}}\right)$	$\sqrt{2-3x}$
497	$\sqrt{\sqrt{5x+4}+\sqrt{5x-4}}\cdot\sqrt{\sqrt{5x+4}-\sqrt{5x-4}}$	$2\sqrt{2}$
498	$\frac{\sqrt[3]{8x^4y^4}+\sqrt[3]{x^7y^7}+\sqrt[6]{x^2y^2}}{\sqrt[3]{x^7y^7}-\sqrt[3]{xy}}$	$\frac{xy+1}{xy-1}$
499	$\sqrt[3]{\frac{(x-1)^4}{x^2+x}}:\left[\sqrt[6]{\left(\frac{x-1}{x+1}\right)^5}\cdot\sqrt{\frac{x^2-1}{x}}\right]$	$\sqrt[6]{x}$
500	$\left(\sqrt[6]{\frac{x+5}{x-2}}\cdot\sqrt[3]{\frac{x+5}{x-2}}\right)^2-\left(\frac{5}{x-2}+1\right)$	$\frac{2}{x-2}$
501	$\sqrt{\frac{(a+2\sqrt{b})(a\sqrt{b}+2b)}{\sqrt{b}}}\cdot\frac{a-2\sqrt{b}}{a^2-4b}$	1
502	$\left[\left(\sqrt[3]{x^2+2xy+y^2}\cdot\sqrt[4]{\frac{x-y}{(x+y)^3}}\right):\sqrt[12]{\frac{x-y}{x+y}}\right]+\sqrt[4]{(x-y)^3\sqrt{\frac{1}{x-y}}}$	$2\sqrt[6]{x-y}$

503	$2\sqrt{\frac{2a^3-a^2}{b^3-b^2}}-3a\sqrt{\frac{2a-1}{b^3-b^2}}+\frac{2}{b}\sqrt{\frac{2a^3-a^2}{b-1}}$	$\frac{a}{b}\sqrt{\frac{2a-1}{b-1}}$
504	$\frac{\sqrt[3]{8x^4y^4}+\sqrt[3]{x^7y^7}+\sqrt[6]{x^2y^2}}{\sqrt[3]{x^7y^7}-\sqrt[3]{xy}}$	$\frac{xy+1}{xy-1}$
505	$\left(\frac{\sqrt{2x+3}}{\sqrt{2x+3}-\sqrt{2x-3}}-\frac{\sqrt{2x+3}}{\sqrt{2x+3}+\sqrt{2x-3}}\right):\frac{\sqrt{2x-3}}{3}$	$\sqrt{2x+3}$
506	$\frac{\sqrt{a-b}}{\sqrt{a+b}+\sqrt{a-b}}-\frac{\sqrt{a-b}}{\sqrt{a+b}-\sqrt{a-b}}$	$\frac{b-a}{b}$
507	$\frac{3\sqrt{a}+2\sqrt{x}}{3\sqrt{a}-2\sqrt{x}}-\frac{3\sqrt{a}-2\sqrt{x}}{3\sqrt{a}+2\sqrt{x}}-\frac{24\sqrt{ax}}{9a-4x}$	0
508	$\frac{2x-\sqrt{4x^2+1}}{x+\sqrt{3x^2+2}}:\frac{x-\sqrt{3x^2+2}}{2x+\sqrt{4x^2+1}}:\frac{1}{x^2+1}$	$\frac{1}{2}$
509	$\sqrt{\left(\sqrt[5]{a^2}-\frac{b}{\sqrt[5]{a^3}}\right)\cdot\left(\sqrt[5]{a^2}-\frac{b}{\sqrt[5]{a^3}}\right)}$	$\frac{\sqrt[5]{a^2}\,\lvert a-b\rvert}{\lvert a\rvert}$
510	$\left[\left(\frac{a+b}{\sqrt{b}}-\sqrt{a}\right):\left(\frac{1}{\sqrt{b}}-\frac{1}{\sqrt{a}}\right)\right]\cdot\frac{a-b}{a\sqrt{a}+b\sqrt{b}}$	$\sqrt{a}$
511	$\left(\sqrt[5]{x\sqrt[3]{x^2}}\cdot\sqrt[5]{x^2\sqrt{x\sqrt[3]{x^2}}}:\sqrt[5]{x^4\sqrt[3]{x^2}}\right)^3$	$\frac{\sqrt[10]{x^9}}{x}$
512	$\sqrt{\frac{\sqrt{x-\sqrt{x^2-y^2}}}{\sqrt{x+\sqrt{x^2-y^2}}}}$	$\frac{\sqrt{2y}\left(\sqrt{x+y}-\sqrt{x-y}\right)}{2y}$
513	$\frac{a^{x+y}}{b}\cdot\sqrt[x-y]{\frac{b^{2x-2y}}{a^{x^2-y^2}}}$	b

trasformare le potenze ad esponente frazionario in radicali

514	$3^{\frac{1}{2}}$	$\sqrt{3}$	$\left(\frac{1}{7}\right)^{\frac{1}{2}}$	$\sqrt{\frac{1}{7}}$
515	$2^{\frac{1}{3}}$	$\sqrt[3]{2}$	$9^{\frac{1}{3}}$	$\sqrt[3]{9}$
516	$7^{\frac{4}{5}}$	$\sqrt[5]{7^4}$	$3^{\frac{2}{5}}$	$\sqrt[5]{3^2}$
517	$6^{\frac{3}{2}}$	$\sqrt{6^3}$	$4^{\frac{2}{3}}$	$\sqrt[3]{4^2}$
518	$5^{\frac{3}{7}}$	$\sqrt[7]{5^3}$	$\left(\frac{6}{7}\right)^{\frac{3}{2}}$	$\sqrt{\left(\frac{6}{7}\right)^3}$
519	$\left(\frac{2}{3}\right)^{\frac{2}{3}}$	$\sqrt[3]{\frac{4}{9}}$	$\frac{2^{\frac{2}{3}}}{3}$	$\frac{\sqrt[3]{4}}{3}$
520	$\left(\frac{7}{5}\right)^{\frac{1}{2}}$	$\sqrt{\frac{7}{5}}$	$\frac{7}{5^{\frac{1}{2}}}$	$\frac{7}{\sqrt{5}}$
521	$\left(\frac{3}{4}\right)^{\frac{2}{5}}$	$\sqrt[5]{\frac{9}{16}}$	$\frac{3^{\frac{2}{5}}}{4}$	$\frac{\sqrt[5]{9}}{4}$
522	$\left(\frac{5}{7}\right)^{-\frac{2}{3}}$	$\sqrt[3]{\frac{49}{25}}$	$\frac{5^{-\frac{2}{5}}}{7}$	$\frac{1}{7\sqrt[5]{25}}$
523	$\frac{3^{\frac{2}{5}}}{4}$	$\frac{\sqrt[5]{9}}{4}$	$\frac{3}{4^{\frac{2}{5}}}$	$\frac{3}{\sqrt[5]{16}}$
524	$\frac{5}{7^{-\frac{2}{3}}}$	$5\sqrt[3]{49}$	$\frac{4}{5^{-\frac{2}{3}}}$	$4\sqrt[3]{25}$
525	$(3a)^{\frac{1}{2}}$	$\sqrt{3a}$	$(2b^2)^{\frac{1}{4}}$	$\sqrt[4]{2b^2}$
526	$(2ab^2)^{\frac{2}{3}}$	$\sqrt[3]{4a^2b^4}$	$\left(\frac{7}{5}\frac{x^3y^2}{a}\right)^{\frac{7}{5}}$	$\sqrt[4]{\frac{7^7}{5^7}\frac{x^{21}y^{14}}{a^7}}$

527	$\left(\frac{a}{b}\right)^{-\frac{1}{2}}$	$\sqrt{\frac{b}{a}}$	$\left(\frac{ax^2}{y^3}\right)^{-\frac{3}{2}}$	$\sqrt[3]{\frac{y^6}{a^2x^6}}$

scrivere sotto forma di potenza a esponente razionale i seguenti radicali

528	$\sqrt[4]{2}$	$2^{\frac{1}{4}}$	$\sqrt[3]{3}$	$3^{\frac{1}{3}}$
529	$\sqrt{5}$	$5^{\frac{1}{2}}$	$\sqrt[5]{2}$	$2^{\frac{1}{5}}$
530	$\sqrt[4]{8}$	$2^{\frac{3}{4}}$	$\sqrt[3]{4}$	$2^{\frac{2}{3}}$
531	$\sqrt[3]{7^2}$	$7^{\frac{2}{3}}$	$\sqrt[5]{9}$	$3^{\frac{2}{5}}$
532	$\sqrt[5]{4}$	$2^{\frac{2}{5}}$	$\sqrt[4]{4}$	$2^{\frac{1}{2}}$
533	$\frac{1}{\sqrt[3]{2}}$	$2^{-\frac{1}{3}}$	$\sqrt[4]{\frac{1}{2}}$	$2^{-\frac{1}{4}}$
534	$\frac{1}{\sqrt[5]{9}}$	$3^{-\frac{2}{5}}$	$\frac{1}{\sqrt[4]{2}}$	$2^{-\frac{1}{4}}$
535	$\frac{3}{\sqrt[3]{3}}$	$3^{\frac{2}{3}}$	$\frac{2}{\sqrt[3]{4}}$	$2^{\frac{1}{3}}$
536	$\sqrt[4]{a}$	$a^{\frac{1}{4}}$	$\sqrt[3]{x^2}$	$x^{\frac{2}{3}}$
537	$\sqrt[3]{(a+b)}$	$(a+b)^{\frac{1}{3}}$	$\frac{1}{\sqrt[5]{(x+y)^3}}$	$(a+b)^{-\frac{3}{5}}$
538	$\sqrt[3]{a^2b^3}$	$a^{\frac{2}{3}}b$	$\sqrt[4]{x^3y^5}$	$x^{\frac{3}{4}}y^{\frac{5}{4}}$

risolvere le seguenti espressioni con potenze ad esponenti frazionari

539	$2^{\frac{2}{5}} \cdot 2^{\frac{3}{5}}$	2
540	$3^{\frac{5}{4}} \cdot 3^{-\frac{3}{4}}$	$3^{\frac{1}{2}}$
541	$2^{-\frac{3}{4}} \cdot 2^{\frac{3}{2}}$	$2^{\frac{3}{4}}$
542	$5^{\frac{3}{2}} \cdot 5^{\frac{1}{4}}$	$5^{\frac{7}{4}}$
543	$7^{\frac{1}{4}} \cdot 7^{-\frac{8}{5}} \cdot 7^{\frac{7}{4}}$	$7^{\frac{2}{5}}$
544	$2^{-\frac{2}{3}} \cdot 2^{\frac{5}{3}} \cdot 2^{\frac{1}{2}}$	$2^{\frac{3}{2}}$
545	$3^{\frac{4}{5}} : 3^{\frac{1}{5}}$	$3^{\frac{3}{5}}$
546	$5^{\frac{5}{8}} : 5^{-\frac{3}{8}}$	5
547	$2^{-\frac{3}{4}} : 2^{-\frac{1}{2}}$	$2^{-\frac{1}{4}}$
548	$7^{-\frac{3}{4}} : 7^{-\frac{3}{4}}$	1
549	$x^{\frac{3}{4}} \cdot x^{-\frac{1}{3}}$	$x^{\frac{5}{12}}$
550	$x^{\frac{3}{4}} : x^{-\frac{1}{3}}$	$x^{\frac{13}{12}}$

551	$a^{\frac{3}{5}} : a^{\frac{1}{3}}$	$a^{\frac{4}{15}}$
552	$\left(5^{\frac{3}{2}}\right)^{\frac{2}{3}}$	5
553	$(4a^3)^{\frac{2}{3}}$	$2^{\frac{4}{3}}a^2$
554	$\left(a^{\frac{3}{5}}\right)^{-\frac{10}{3}}$	$\left(\frac{1}{a}\right)^2$
555	$2^{-\frac{1}{2}} \cdot 2 \cdot 2^{-\frac{1}{2}}$	1
556	$5^2 \cdot 5^{\frac{3}{4}} \cdot 5^{-\frac{7}{2}}$	$\left(\frac{1}{5}\right)^{\frac{3}{4}}$
557	$x^{-\frac{3}{4}} \cdot x^{\frac{3}{2}} : x^{-\frac{1}{2}}$	$x^{\frac{5}{4}}$
558	$y^{-1} \cdot y^{\frac{1}{2}} : y^1 \cdot y^{-\frac{3}{2}}$	$\frac{1}{y^3}$
559	$\left(x^{\frac{2}{3}} \cdot x^{-1}\right)^{-1} : x^{\frac{1}{3}}$	1

560	$\left(a\, b^{\frac{3}{2}}\, c\right)\cdot\left(a^{\frac{1}{2}}\, b^{-1} c^{-\frac{2}{3}}\right)$	$a^{\frac{3}{2}}\, b^{\frac{1}{2}}\, c^{\frac{1}{3}}$
561	$\left(a\, b^{\frac{3}{2}}\, c\right):\left(a^{\frac{1}{2}}\, b^{-1} c^{-\frac{2}{3}}\right)$	$a^{\frac{1}{2}}\, b^{\frac{5}{2}}\, c^{\frac{5}{3}}$
562	$\left[\left(2^{\frac{1}{2}}\, x^{\frac{1}{3}} y^2\, z^{-3}\right)^{\frac{4}{3}}\right]^{\frac{1}{2}}\cdot\left(2^{-\frac{1}{3}}\, x^{-\frac{2}{9}} y^{-\frac{4}{3}}\, z^2\right)$	*1*
563	$16^{\frac{1}{6}}\cdot 32^{\frac{1}{6}}$	$2^{\frac{3}{2}}$
564	$9^{\frac{1}{3}}\cdot 3^{\frac{1}{2}}\cdot 27^{\frac{1}{6}}$	$3^{\frac{5}{3}}$
565	$8^{-\frac{2}{5}}\cdot 4^{\frac{2}{3}} : 2^{\frac{4}{15}}$	$2^{-\frac{2}{15}}$
566	$\left(3^{-\frac{1}{3}}\cdot 2^{-\frac{2}{3}}\right)^{-\frac{6}{5}}\cdot(3^3\cdot 2)^{\frac{1}{5}}$	*6*
567	$2^{\frac{1}{12}}\cdot 8^{\frac{1}{12}}\cdot 2^{\frac{1}{2}}$	$2^{\frac{5}{6}}$
568	$\dfrac{100^{\frac{1}{5}} : 10^{-\frac{1}{3}}}{1000^{-\frac{1}{5}}}$	1