

# Calcolo di Domini

## funzioni algebriche

1	$y = \frac{2x - 1}{7 - x^2}$	$\mathbb{R} - \{-\sqrt{7}, +\sqrt{7}\}$
2	$y = x^3 - 2x^2 - 3x - 2$	$\mathbb{R}$
3	$y = \frac{1 - x^2}{x^2 + x + 3}$	$\mathbb{R}$
4	$y = \sqrt{x^2 - 2x - 2}$	$]-\infty, 1 - \sqrt{3}] \cup [1 + \sqrt{3}, +\infty[$
5	$y = \frac{x\sqrt{x-3}}{x^2 - 16}$	$[3,4[ \cup ]4, +\infty[$
6	$y = \frac{3x^2 - 2}{ x+1 -5}$	$\mathbb{R} - \{+4, -6\}$
7	$y = \sqrt{x+1} + \sqrt{x^2 - 5}$	$[\sqrt{5}, +\infty[$
8	$y = \sqrt[5]{\frac{x^2 - 1}{x^2 - 4x + 3}}$	$\mathbb{R} - \{1,3\}$
9	$y = \frac{\sqrt{x^2 + 3}}{ x^2 - 1  + 3x}$	$\mathbb{R} - \left\{ \frac{-3 - \sqrt{13}}{2}, \frac{3 - \sqrt{13}}{2} \right\}$
10	$y = \frac{x^2 + 5}{x^2 + x - 6}$	$\mathbb{R} - \{-3,2\}$
11	$y = \sqrt{8 - x^2} + \sqrt{x - 1} + \sqrt{x}$	$[1,2\sqrt{2}]$
12	$y = \sqrt{ 5 - 2x  - 4 - x}$	$]-\infty, \frac{1}{3}] \cup [9, +\infty[$
13	$y = \frac{x + 9}{x^2 + 2x + 1}$	$\mathbb{R} - \{-1\}$
14	$y = \frac{x - 7}{x^2 - 2 x  - 3}$	$\mathbb{R} - \{-3, +3\}$
15	$y = \frac{\sqrt{-1+x}}{x^2 + x + 1}$	$[1, +\infty[$
16	$y = \sqrt{\frac{3x -  x+4  - 1}{6 -  1-x^2 }}$	$]-\infty, -\sqrt{7}[ \cup \left[ \frac{5}{2}, \sqrt{7} \right[$
17	$y = \sqrt{\frac{2x + 3}{x - 1}}$	$]-\infty, -\frac{3}{2}] \cup ]1, +\infty[$
18	$y = \frac{x^2 + 5}{x^3}$	$\mathbb{R} - \{0\}$
19	$y = \sqrt{\sqrt{x-1} - x + 3}$	$[1,5]$

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20	$y = 3x^3 - 5x^2 + 1$	$\mathbb{R}$
21	$y = \frac{x+3}{x^2 - 1}$	$\mathbb{R} - \{-1, 1\}$
22	$y = \frac{3x-1}{x^2 - 5x + 6}$	$\mathbb{R} - \{2, 3\}$
23	$y = \sqrt{1 - x^2}$	$-1 \leq x \leq 1$
24	$y = \sqrt{\frac{x-1}{x(x+1)}}$	$-1 < x < 0; x \geq 1$
25	$y = \sqrt{2x-1 +  x+1 }$	$x \geq 0$
26	$y = \sqrt{4 - x^2}$	$-2 \leq x \leq 2$
27	$y = \frac{3}{x-1}$	$\mathbb{R} - \{1\}$
28	$y = \frac{1}{x^2}$	$\mathbb{R} - \{0\}$
29	$y = \sqrt{x^2 - 4}$	$x \leq -2; x \geq 2$
30	$y = \frac{1}{\sqrt{x^2 + 1}}$	$\mathbb{R}$
31	$y = \sqrt{\frac{2+x^2}{x}}$	$x > 0$
32	$y = \sqrt{\frac{x+1}{x-1}}$	$x \leq -1; x > 1$
33	$y = \sqrt{\frac{1+x^2}{-3}}$	<i>impossibile</i>
34	$y = \frac{x^2 - x + 1}{x^2 - 7x + 12}$	$\mathbb{R} - \{3, 4\}$
35	$y = \frac{3x+1}{2x-1}$	$\mathbb{R} - \left\{\frac{1}{2}\right\}$
36	$y = \frac{3x+1}{x^3 - x}$	$\mathbb{R} - \{-1, 0, 1\}$
37	$y = \sqrt{9 - x^2} + \frac{5}{x}$	$-3 \leq x < 0; 0 < x \leq 3$
38	$y = \frac{1}{\sqrt{x^2 - 3x}}$	$x < 0; x > 3$

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39	$y = \sqrt{ x }$	$\mathbb{R}$
40	$y = \frac{1}{\sqrt{ x-1 }}$	$\mathbb{R} - \{1\}$
41	$y = \sqrt{ x  - x^2}$	$-1 \leq x \leq 1$
42	$y = \frac{2}{x-1} - \frac{1}{x} - \frac{1}{x^2-x}$	$\mathbb{R} - \{0, 1\}$
43	$y = \frac{x^2 - 5x + 6}{x^2 - 3x + 10}$	$\mathbb{R}$
44	$y = \frac{2x^2 - x + 3}{-3x^2 + 16x - 5}$	$\mathbb{R} - \left\{\frac{1}{3}; 5\right\}$
45	$y = \frac{3x^2 + 5x - 2}{3x^2 - x - 14}$	$\mathbb{R} - \left\{-2, \frac{7}{3}\right\}$
46	$y = \sqrt{x+3}$	$x \geq -3$
47	$y = \sqrt{1+x^2}$	$\mathbb{R}$
48	$y = \frac{x+1}{\sqrt{x^2 - 6x + 9}}$	$\mathbb{R} - \{3\}$
49	$y = \frac{x-4}{ x+5 }$	$\mathbb{R} - \{-5\}$
50	$y = \frac{3x}{2 x -1}$	$\mathbb{R} - \left\{-\frac{1}{2}, \frac{1}{2}\right\}$
51	$y = \frac{x^2 + x - 1}{x + 2}$	$\mathbb{R} - \{-2\}$
52	$y = \frac{x^3 - 1}{x^2 + x - 2}$	$\mathbb{R} - \{-2; 1\}$
53	$y = x^3 - \frac{x}{2} + 1$	$\mathbb{R}$
54	$y = \frac{x+5}{x^4+2}$	$\mathbb{R}$
55	$y = \frac{x^2 - 3x}{x^3 - 8}$	$\mathbb{R} - \{2\}$
56	$y = \sqrt{x^2 - 1} + \sqrt{x-5}$	$[5; +\infty[$

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57	$y = \frac{x + \sqrt{x+1}}{\sqrt{x-2}}$	$]2; +\infty[$
58	$y = \frac{\sqrt[3]{x-\frac{1}{2}}}{x}$	$\mathbb{R} - \{0\}$
59	$y = \frac{\sqrt{x^2+3} - \sqrt{x+7}}{x^2 - 4x + 4}$	$] -7; +\infty[ - \{2\}$
60	$y = \frac{1}{\sqrt[4]{x^2 - 5x + 6} - \sqrt{x-1}}$	$[1; 2] \cup [3; +\infty[ - \left\{ \frac{5}{3} \right\}$
61	$y =  x^2 + x - 9 $	$\mathbb{R}$
62	$y = \frac{x}{ x-5 }$	$\mathbb{R} - \{5\}$
63	$y = \frac{x-1}{ x-3  +  x+1 }$	$\mathbb{R}$
64	$y = \frac{3+x}{ x+2  +  x^2 - x - 6 }$	$\mathbb{R} - \{-2\}$
65	$y = \frac{ x+5 }{ x-1  -  x-2 }$	$\mathbb{R} - \left\{ \frac{3}{2} \right\}$
66	$y = \frac{\sqrt{x+3}}{\sqrt{ x+1  - 2}} + 1$	$]1; +\infty[$
67	$y = \frac{\sqrt{x^2 - 2x + 1} - 3}{\sqrt{ x } - \sqrt{x+1}}$	$\left[ -1; -\frac{1}{2} \right] \cup \left[ -\frac{1}{2}; +\infty \right[$
68	$y = \frac{ x-1  + \sqrt{x}}{\sqrt{3 -  x^2 - 5x + 6 } - \sqrt{x+1}}$	$\left[ \frac{5 - \sqrt{13}}{2}; \frac{5 + \sqrt{13}}{2} \right] - \{2\}$
69	$y = \frac{\sqrt{x +  x^2 - 1 } - 3}{\sqrt{x} + \sqrt{x-1}}$	$[1; +\infty[$
70	$y = \sqrt{\frac{x^2 -  x+3 }{\sqrt{x-1} +  x+3 }}$	$\left[ \frac{1 + \sqrt{13}}{2}; +\infty \right[$
71	$y = \sqrt{x-3}$	$R: x \geq 3$

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72	$y = \sqrt{x^2 - 6x}$	$x \leq 0 \cup x \geq 6$
73	$y = \sqrt[3]{4 - 2x}$	$\mathbb{R}$
74	$y = \sqrt[4]{x^2 + 5}$	$\mathbb{R}$
75	$y = \sqrt[4]{\frac{x - x^2}{x^2 + 3}}$	$0 \leq x \leq 1$
76	$y = \sqrt[5]{\frac{x}{x^3 - 1}}$	$x \neq 1$
77	$y = \sqrt{x^3 - 3x} + \sqrt[3]{x^2 - 3x - 4}$	$x \geq 3 \cup x \leq 0$
78	$y = \frac{4 - 8x}{\sqrt{6 + x^2}}$	$\mathbb{R}$
79	$y = \sqrt[9]{\frac{5 - x}{ x - 1 }}$	$\mathbb{R} - \{1\}$
80	$y = \frac{3x^2 + 5x - 2}{\sqrt{x + 5} - 4}$	$x \geq -5 \cap x \neq 11$
81	$y = \frac{2x + x^2}{\sqrt{x^2 - 8}} + \sqrt{6 - x^2}$	$\emptyset$
82	$y = \frac{4x^2}{\sqrt{4 - x}} - \frac{2x}{\sqrt{2x - 3}}$	$\frac{3}{2} \leq x \leq 4$
83	$y = \sqrt[3]{\frac{3x - 6}{3 -  x }} + \frac{6x}{\sqrt[5]{x - 2}}$	$x \neq 2, \pm 3$
84	$y = \sqrt{\frac{x^3(x - 1)^2}{x + 3}}$	$x < -3 \cup x \geq 0$
85	$y = \frac{1}{\sqrt{ x }} + \frac{1}{ x^2 - 1 } + \sqrt{2 - x}$	$x \leq 2 \cap x \neq 0, \pm 1$
86	$y = \frac{\sqrt{16 - x^2}}{x^2 - 6x + 9} + \frac{x}{\sqrt{x^2 - 16}}$	$\emptyset$
87	$y = \sqrt{1 - \sqrt{x}} + \sqrt[3]{x + 1}$	$0 \leq x \leq 1$
88	$y = \frac{\sqrt{4x - 6}}{\sqrt[3]{x^2(x - 8)}} + \sqrt[3]{\frac{1}{4 -  x }}$	$\frac{3}{2} \leq x < 4 \cup 4 < x < 8 \cup x > 8$
89	$y = \sqrt{x - \sqrt{2x + 3}} + \sqrt{x^3 - 3x^2}$	$x \geq 3$
90	$y = \sqrt[4]{x^5 + x^3} + \sqrt{\sqrt{3x - 2} - 5}$	$x \geq 9$

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## funzioni logaritmiche ed esponenziali

91	$y = \log_2(x + 5) + 1$	$] -5; +\infty[$
92	$y = \log_2 \frac{x+5}{1-x^2}$	$] \infty, -5[ \cup ] -1, +1[$
93	$y = \log_{\frac{1}{2}} \frac{x-3}{1-x}$	$] 1, 3[$
94	$y = \frac{3 + \log_4(x^2 + 1)}{\log_x 5}$	$] 0; 1[ \cup ] 1; +\infty[$
95	$y = \sqrt{\log_{\frac{1}{3}}(x^2 - 3x - 1)}$	$\left[ \frac{3 - \sqrt{17}}{2}, \frac{3 - \sqrt{13}}{2} \right] \cup \left[ \frac{3 + \sqrt{13}}{2}, \frac{3 + \sqrt{17}}{2} \right]$
96	$y = \sqrt{\ln x^2 - 9 }$	$[ -\infty, -\sqrt{10} ] \cup [ -2\sqrt{2}, 2\sqrt{2} ] \cup [ \sqrt{10}, +\infty ]$
97	$y = \sqrt{\frac{\log_{\frac{1}{2}}(x-3) + 2}{3 + \log_{x+1} 5}}$	$] 3; 7[$
98	$y = \log_{x-5}(x-2)$	$] 5, 6[ \cup ] 6, +\infty[$
99	$y = \log_3 \log_{\frac{1}{4}}(5x-3)$	$] \frac{3}{5}, \frac{4}{5}[$
100	$y = \ln \ln(x^2 - 3)$	$] -\infty, -2[ \cup ] 2, +\infty[$
101	$y = \ln  \ln  x  $	$\mathbb{R} - \{0, \pm 1\}$
102	$y = \ln \left( 2 - \left  \frac{x}{1-3x} \right  \right)$	$] -\infty, \frac{2}{7}[ \cup ] \frac{2}{5}, +\infty[$
103	$y = \frac{\left  \ln \frac{x^2+x-1}{x-2} - 1 \right }{\sqrt{x}}$	$] 0; \frac{1}{2}(\sqrt{5}-1)[ \cup ] 2; +\infty[$
104	$y = \sqrt[4]{\log_{\frac{1}{2}}(x^2 - 4) - \log_{\frac{1}{2}}(x - 1)}$	$] 2, \frac{1+\sqrt{13}}{2}[$
105	$y = \frac{\ln(2 -  x-3 )}{\sqrt{\log_2 x - 2}}$	$] 4, 5[$
106	$y = \ln \frac{x^2 - 9}{x - 2} + e^{\sqrt{x^4 - 16}}$	$] -3, -2] \cup ] 3, +\infty[$
107	$y = e^{\frac{x+3}{x-1}}$	$\mathbb{R} - \{1\}$

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108	$y = 5^{\frac{x}{2-x^2}}$	$\mathbb{R} - \{\pm\sqrt{2}\}$
109	$y = 2^{\frac{x+1}{x^2-4}}$	$\mathbb{R} - \{\pm 2\}$
110	$y = e^{\frac{\sqrt{x^2-7x+12}}{x-5}}$	$]-\infty; 3] \cup [4; 5[ \cup ]5; +\infty[$
111	$y = \left(\frac{3}{4}\right)^{\sqrt{2-x^2}}$	$[-\sqrt{2}, +\sqrt{2}]$
112	$y = 3^{\frac{x}{5-\sqrt{x-x^2}}}$	$[0, 1]$
113	$y = \left(\frac{3x-4}{4x-1}\right)^{\frac{x-1}{x-3}}$	$]-\infty, \frac{1}{4}[ \cup \left]\frac{1}{4}, 3\right[ \cup ]3, +\infty[$
114	$y = \sqrt{9 \cdot 3^{2x} - 82 \cdot 3^x + 9}$	$]-\infty, -2] \cup [2, +\infty[$
115	$y = \sqrt{2^{2x} - 2^x}$	$[0, +\infty[$
116	$y = \sqrt{\left(\frac{1}{2}\right)^{\frac{x-3}{x+5}} - \frac{1}{8}}$	$]-\infty; -9] \cup ]-5; +\infty[$
117	$y = \frac{3^{2x} + 5^{\frac{3x}{x-1}}}{x + \frac{1}{2}}$	$\mathbb{R} - \left\{-\frac{1}{2}; 1\right\}$
118	$y = \frac{\sqrt[x]{e^{x+1} + 3}}{\sqrt{x^2 - 4x + 4}}$	$]0; 2[ \cup ]2; +\infty[$
119	$y = \frac{3^{\frac{1}{x+1}} - 5^x}{\left(\frac{1}{4}\right)^{x^2} - 1}$	$\mathbb{R} - \{-1; 0\}$
120	$y = \frac{2^x + 5}{\sqrt{\log_3(x - 2x^2) + 2}}$	$\left]\frac{1}{6}, \frac{1}{3}\right[$
121	$y = \frac{\sqrt[3]{2x^2 - x + 5}}{\sqrt{\ln x }}$	$]-\infty, -1[ \cup ]1 + \infty[$

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122	$y = \frac{e^{-x^2+3x}}{\ln( x^2 - 2  + 3x)}$	$\left] -\infty, -\frac{\sqrt{21}+3}{2} \right[ \cup \left] -\frac{\sqrt{21}+3}{2}, -\frac{\sqrt{17}+3}{2} \right[ \cup \left] \frac{3-\sqrt{17}}{2}, \frac{3-\sqrt{13}}{2} \right[ \cup \left] \frac{3-\sqrt{13}}{2}, +\infty \right[$
123	$y = \frac{2^{2x} - 6}{\ln( x^2 - 8 )}$	$\mathbb{R} - \{\pm 2\sqrt{2}; \pm 3; \pm\sqrt{7}\}$
124	$y = e^x \log_{\frac{1}{3}}(3-x) + \log_5(1-x^2) + \log_5 x$	$]0,1[$
125	$y = \log_7(e^{2x} - 5e^x + 6) + \log_7 x-2 $	$]-\infty, \ln 2[ \cup ]\ln 3, 2[ \cup ]2, +\infty[$
126	$y = \frac{3^{2x} + 3^x - 1}{\ln \frac{x+1}{x}}$	$]-\infty; -1[ \cup ]0; +\infty[$
127	$y = \frac{\log_2(x+1) + 2^{\frac{x}{x-1}}}{2^{\sqrt{x}}}$	$[0; 1[ \cup ]1; +\infty[$
128	$y = \sqrt{\frac{\ln(2^x - 1)}{3^x - 1}}$	$[1; +\infty[$
129	$y = \frac{1}{3} \frac{\ln \ln \frac{1}{\sqrt{x^2 + 3x - 10}}}{\sqrt{ x-1  - x^2}}$	$\emptyset$
130	$y = \frac{\ln \sqrt{\frac{x(x-1)}{x+5}}}{\frac{3x}{e^{x+1}} - 2}$	$]-5; -1[ \cup ]-1; 0[ \cup ]1; +\infty[$
131	$y = \frac{3 + e^{\frac{x^2-3x+2}{x-6}}}{\log_{\frac{3}{4}} \sqrt{x^2 - \frac{1}{4}}}$	$]-\infty; -\frac{1}{2}[ \cup ]\frac{1}{2}; +\infty[ - \left\{ \pm \frac{\sqrt{5}}{2}; 6 \right\}$
132	$y = \sqrt[3]{\frac{2^{\frac{x(x+2)}{2-x}} - 1}{\log_3( x -1)}}$	$]-\infty; -1[ \cup ]1; +\infty[ - \{\pm 2\}$
133	$y = \log_{\frac{1}{2}} \frac{x^2 - 1}{x^2 + 1} + 3^{\frac{x}{\sqrt{x-1}}} \log_2 \frac{1}{x+2} - \sqrt{2} e^{\frac{1}{\ln x}} \log_2 \sqrt{\frac{x}{x+1}}$	$]1; +\infty[$
134	$y = \frac{\ln \ln( x-1  - 5)}{1 - e^{\frac{x}{\sqrt{x- 1-x }}}}$	$]7; +\infty[$
135	$y = \sqrt{\frac{\log_x x-5 }{e^{\ln \frac{2x(x-4)}{x+1}}}}$	$[4; +\infty[$

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136	$y = \left(\log_{\frac{3}{2}}(x-3)\right)^{\frac{x+2}{x}}$	$]3, +\infty[$
funzioni goniometriche		
137	$y = \frac{3}{\sin x}$	$\mathbb{R} - \{k\pi\}, k \in \mathbb{Z}$
138	$y = \sqrt{\sin x + \cos x}$	$[-\frac{\pi}{4} + 2k\pi, \frac{3}{4}\pi + 2k\pi], k \in \mathbb{Z}$
139	$y = \ln \arctg x$	$]0, +\infty[$
140	$y = \sqrt{\frac{2 \sin x - 1}{\cot x}}$	$\left[\frac{\pi}{6} + 2k\pi, \frac{\pi}{2} + 2k\pi\right] \cup \left[\frac{5}{6}\pi + 2k\pi, (2k+1)\pi\right] \cup \left]\frac{3}{2}\pi + 2k\pi, 2(k+1)\pi\right[ k \in \mathbb{Z}$
141	$y = \arcsen \frac{3}{x^2 - 4}$	$]-\infty, -\sqrt{7}] \cup [-1, +1] \cup [\sqrt{7} + \infty[$
142	$y = \frac{3 \sin x + \cos x}{\sqrt[4]{ \operatorname{tg} x - \sqrt{3} }}$	$\mathbb{R} - \left\{\frac{\pi}{3} + k\pi, \frac{\pi}{2} + k\pi\right\}, k \in \mathbb{Z}$
143	$y = \log_7(\cot x - \sqrt{3})$	$]k\pi, \frac{\pi}{6} + k\pi[ , k \in \mathbb{Z}$
144	$y = \arccos \frac{1}{\operatorname{tg} x}$	$\left[\frac{\pi}{4} + k\pi, \frac{3}{4}\pi + k\pi\right], k \in \mathbb{Z}$
145	$y = \sqrt{\frac{\cos x}{1 - \cos 2x}}$	$]2k\pi, \frac{\pi}{2} + 2k\pi] \cup \left[\frac{3}{2}\pi + 2k\pi, 2\pi + 2k\pi, k \in \mathbb{Z}$
146	$y = \frac{2 \cos x - 1}{\sin x + 1}$	$\left[2k\pi, \frac{1}{2}\pi + 2k\pi\right] \cup \left]\frac{3}{2}\pi + 2k\pi, 2(k+1)\pi, k \in \mathbb{Z}\right.$
147	$y = \sqrt{x} + \arccos x$	$[0, 1]$
148	$y = \arctg \left  \frac{2-5x}{3-x} \right $	$\mathbb{R} - \{3\}$
149	$y = \log_3 \arcsen(e^x - 2)$	$]\ln 2, \ln 3]$
150	$y = \frac{\cos x}{\ln  \cos x }$	$\mathbb{R} - \left\{k \frac{\pi}{2}\right\}, k \in \mathbb{Z}$
151	$y = \arcsen(1 - \sqrt{x+3})$	$[-3, 1]$
152	$y = 2\sqrt{\left  \frac{\sin x}{1-2\cos x} \right }$	$\mathbb{R} - \left\{\pm \frac{\pi}{3} + 2k\pi\right\}, k \in \mathbb{Z}$

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153	$y = \log_3(\tan x + 3\cot x - 4)$	$\left]k\pi, \frac{\pi}{4} + k\pi\right[ \cup \left]2\arctg \frac{\sqrt{10}-1}{3}, \frac{\pi}{2} + k\pi\right[$ $k \in \mathbb{Z}$
154	$y = \sqrt{\frac{1 - \cos x}{1 - \sin x}}$	$\mathbb{R} - \left\{\frac{\pi}{2} + 2k\pi\right\}, k \in \mathbb{Z}$
155	$y = \operatorname{arccotg}(3x - 2\sqrt[4]{5 - 7x})$	$\left]-\infty, \frac{5}{7}\right]$
156	$y = \ln\left(1 - 2\cos\frac{x}{2}\right)$	$\left]\frac{2}{3}\pi + 4k\pi, \frac{10}{3}\pi + 4k\pi\right], k \in \mathbb{Z}$
157	$y = \frac{1 - 2\sin^2 x}{1 - 2\cos x}$	$\mathbb{R} - \left\{\frac{\pi}{3} + 2k\pi, \frac{5}{3}\pi + 2k\pi\right\}, k \in \mathbb{Z}$
158	$y = \operatorname{arcsen}\sqrt{x - 2x^2}$	$\left[0, \frac{1}{2}\right]$
159	$y = \sqrt{\operatorname{arcsen}(x - 2)}$	[2,3]
160	$y = \sqrt{\sqrt{3}\sin^2 x - \sin x \cos x}$	$\left[\frac{\pi}{6} + k\pi, (k + 1)\pi\right], k \in \mathbb{Z}$
161	$y = \arccos \frac{x+1}{x-2}$	$\left]-\infty, \frac{1}{2}\right]$
162	$y = \operatorname{arccotg}\sqrt{x^2 - 9}$	$]-\infty, -3] \cup [3, +\infty[$
163	$y = \frac{\sin 3x + 2}{\cos 2x - 1}$	$\mathbb{R} - \{k\pi\}, k \in \mathbb{Z}$
164	$y = \frac{5 - 2\cos\frac{x}{2}}{\sin\left(\frac{x}{2}\right) + \frac{\sqrt{3}}{2}}$	$\mathbb{R} - \left\{-\frac{2}{3}\pi + 4k\pi, \frac{8}{3}\pi + 4k\pi\right\}, k \in \mathbb{Z}$
165	$y = 2 - \frac{\cos x - \sqrt{3}}{\tan x + 1}$	$\mathbb{R} - \left\{-\frac{\pi}{4} + k\pi, \frac{\pi}{2} + k\pi\right\}, k \in \mathbb{Z}$
166	$y = \tan\frac{x}{3} - \frac{2+x}{2\cot x}$	$\mathbb{R} - \left\{\frac{3\pi}{2} + 3k\pi, \frac{\pi}{2} + k\pi\right\}, k \in \mathbb{Z}$
167	$y = \frac{3 - \tan x}{\sin 2x - \cos x}$	$\mathbb{R} - \left\{\frac{5\pi}{6} + 2k\pi, \frac{\pi}{6} + 2k\pi, \frac{\pi}{2} + k\pi\right\}, k \in \mathbb{Z}$
168	$y = \frac{2}{\sqrt{\cos\frac{x}{2} - \frac{1}{2}}}$	$\left]-\frac{2\pi}{3} + 4k\pi; \frac{2\pi}{3} + 4k\pi\right[, k \in \mathbb{Z}$
169	$y = \frac{\tan x \cos x}{1 - \sin x \cot x}$	$\mathbb{R} - \{2k\pi\}, k \in \mathbb{Z}$
170	$y = \frac{1 + \tan x}{\sqrt{\cos^2 x - 1}}$	$\emptyset$

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171	$y = \cot \frac{x}{2} \left( 1 - \frac{\tan^2 x}{\sqrt{1 - \tan x}} \right)$	$\left] -\frac{\pi}{2} + k\pi, k\pi \right[ \cup \left] k\pi, \frac{\pi}{4} + k\pi \right[$
172	$y = \sqrt[4]{\frac{\sin x \cos x - 1}{\sqrt{3} - \cot x}}$	$\left] k\pi, \frac{\pi}{6} + k\pi \right[$
173	$y = \frac{\sqrt{\sin x (\cos x - \frac{1}{2})}}{ \tan x  - 1}$	$\left[ 2k\pi, \frac{\pi}{3} + 2k\pi \right] \cup \left[ \pi + 2k\pi, \frac{5\pi}{3} + 2k\pi \right] + \left\{ \frac{3}{2}\pi + 2k\pi, \frac{\pi}{4} + k\pi \right\}$
174	$y = \frac{\arcsin x - \pi}{x^2 - 1}$	$\left] -1, 1 \right[$

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175	$y = \sqrt[4]{\frac{x^2 - 4}{4 - 3x}}$	$\left] -\infty, -2 \right] \cup \left] \frac{4}{3}, 2 \right]$
176	$y = \sqrt[3]{\frac{x^2 - 1}{ 4 - x^2 }}$	$\mathbb{R} - \{\pm 2\}$
177	$y = \frac{\sqrt{1 - 2x^2}}{\arccos(7x - 1)}$	$\left[ 0, \frac{2}{7} \right]$
178	$y = \frac{\operatorname{arctg}(\sqrt{x} - 5)}{\ln \sqrt{5} - x^2 }$	$\left[ 0, 2 \right] \cup \left] 2, \sqrt{5} \right[ \cup \left] \sqrt{5}, \sqrt{6} \right[ \cup \left] \sqrt{6}, +\infty \right[$
179	$y = \sqrt{\frac{x^2 - 1}{2x + 1}} + \sqrt{\frac{3x}{2 - x^2}}$	$[1, \sqrt{2}]$
180	$y = \left( \frac{x+1}{x^2} \right)^{\operatorname{sen} x}$	$[-1, +\infty[ - \{0\}$
181	$y = \sqrt{\operatorname{arcsen} \ln(x+2)}$	$[-1, e-2]$
182	$y = 1 - e^{\frac{\sin x}{\cos^2 x - 1}}$	$\mathbb{R} - \{k\pi\}, k \in \mathbb{Z}$
183	$y = \frac{\sqrt{\log_2(x-1)}}{\sin x (\cos x - 1)}$	$[2, +\infty[ - \{k\pi\}, k \in \mathbb{N}$
184	$y = \frac{\sqrt{e^{\frac{1}{2} \tan x}}}{\log_3(x^2 - x) - 2}$	$\left] -\infty, 0 \right[ \cup \left] 1, +\infty \right[ - \left\{ \frac{\pi}{2} + k\pi, \frac{1 \pm \sqrt{37}}{2} \right\}, k \in \mathbb{Z}$
185	$y = \frac{\ln \operatorname{sen} x}{\ln \cos x}$	$\left] 2k\pi, \frac{\pi}{2} + 2k\pi \right[ , k \in \mathbb{Z}$

# Calcolo di Domini

186	$y = \sqrt{\frac{x^3 - 1}{x^2 - 9x + 18}} + e^{\frac{1}{\tan x}}$	$[1, 3[ \cup ]6, +\infty[ - \left\{ k \frac{\pi}{2} \right\}, k \in \mathbb{N}$
186	$y = \frac{\tan \ln 2x}{\ln \tan 2x}$	$]k \frac{\pi}{2}, \frac{\pi}{8} + k \frac{\pi}{2}[ \cup ]\frac{\pi}{8} + k \frac{\pi}{2}, \frac{\pi}{4} + k \frac{\pi}{2}[$ $- \left\{ \frac{1}{2} e^{\frac{\pi}{2} + k\pi} \right\}, k \in \mathbb{Z}$
187	$y = \frac{\sqrt{ \cos x  - \frac{1}{2}}}{e^{\frac{1}{\sin x}}}$	$\left[ -\frac{\pi}{3} + k\pi, k\pi \right] \cup \left] k\pi, \frac{\pi}{3} + k\pi \right],$ $k \in \mathbb{Z}$
188	$y = \ln \left( \sin x - \frac{\sqrt{3}}{2} \right) + \ln \sqrt{\cos x} - \ln \left( \tan \frac{x}{2} + 1 \right)$	$\left] \frac{\pi}{3} + 2k\pi, \frac{\pi}{2} + 2k\pi \right], k \in \mathbb{Z}$
189	$y = \sqrt{\log_{\frac{1}{2}} \arccos x + \log_2 \frac{\pi}{3}}$	$\left[ \frac{1}{2}, 1 \right]$
190	$y = \frac{\ln( \sin x  - 1)}{\ln \sqrt{\cos x}}$	$\emptyset$
191	$y = \frac{\sqrt{\arcsin x - \frac{\pi}{3}}}{\ln x}$	$\left[ \frac{\sqrt{3}}{2}, 1 \right]$
192	$y = \frac{1}{2 \ln 3x - 1} + \ln \arcsin x$	$\left] 0, \frac{\sqrt{e}}{3} \right] \cup \left] \frac{\sqrt{e}}{3}, 1 \right]$
193	$y = e^{\frac{\tan x}{ \cos x  - \frac{\sqrt{2}}{2}}}$	$\mathbb{R} - \left\{ \frac{\pi}{2} + k\pi, \frac{\pi}{4} + k \frac{\pi}{2} \right\}, k \in \mathbb{Z}$
194	$y = \frac{\sqrt{\arcsin(2 x  - 1)}}{\ln(2x^3 - x)}$	$\left[ -\frac{\sqrt{2}}{2}, -\frac{1}{2} \right] \cup \left] \frac{\sqrt{2}}{2}, 1 \right]$
195	$y = 1 - e^{ \sin x  - 1} + e^{\frac{1}{\sqrt{1 - \tan x}}}$	$\left] -\frac{\pi}{2} + k\pi, \frac{\pi}{4} + k\pi \right]$
196	$y = \frac{x(x - 3)}{2 \arccos x - \pi}$	$[-1, 0[ \cup ]0, 1]$
197	$y = \sqrt{1 + \frac{\pi}{\arcsin x}}$	$]0, 1]$
198	$y = \frac{\sqrt[4]{3 - \arcsin x}}{\sqrt[4]{\arctan \frac{x}{2} + \pi}}$	$[-1, 1]$
199	$y = \frac{x - 1}{\pi -  \arctan x }$	$\mathbb{R}$
200	$y = \ln( x^2 - x  - 4) + \arccos \ln x$	$\left] \frac{1 + \sqrt{17}}{2}, e \right]$
201	$y = \arctan \sqrt{\frac{x^2 - 4}{x - 1}}$	$[-2, 1[ \cup [2, +\infty[$