

funzioni costanti		
1	$f(x) = 0$	0
2	$f(x) = 5$	0
3	$f(x) = 10^2$	0
4	$f(x) = \frac{1}{2} \ln 3$	0
5	$f(x) = \sqrt[3]{4}$	0
6	$f(x) = \pi$	0
7	$f(x) = e^5 \sqrt[3]{\pi}$	0
8	$f(x) = \frac{2x - 5 - 6x + 9 + 4x}{7}$	0
9	$f(x) = e^{\sqrt{\pi}}$	0
10	$f(x) = 5 \log_2(\pi + \sqrt{3})$	0
funzioni goniometriche costanti		
11	$f(x) = \tan \ln \pi$	0
12	$f(x) = \sin 1$	0
13	$f(x) = \csc 2$	0
14	$f(x) = \sec \cot \sqrt{\pi}$	0
15	$f(x) = \sqrt{\sin^2 x + \cos^2 x}$	0

## prodotto di una costante per una funzione

16	$f(x) = 3 \cdot x$	3
17	$f(x) = \sqrt{3} \cdot x$	$\sqrt{3}$
18	$f(x) = 4 \cdot x^2$	$8x$
19	$f(x) = k \cdot \sqrt{x}$	$\frac{k}{2\sqrt{x}}$
20	$f(x) = 5 \cdot \log_{10} x$	$\frac{5}{x} \log_{10} e$
21	$f(x) = \frac{\pi}{2} \cdot \ln x$	$\frac{\pi}{2x}$
22	$f(x) = 3 \cdot 2^x$	$2^x \ln 8$
23	$f(x) = 3 \cdot 10^x$	$10^x \ln 1000$
24	$f(x) = \frac{7}{2} \cdot x$	$\frac{7}{2}$
25	$f(x) = 2^3 \cdot x$	$2^3$
26	$f(x) = \pi \cdot x^7$	$7\pi x^6$
27	$f(x) = \sqrt{7} \cdot x^5$	$5\sqrt{7} x^4$
28	$f(x) = \log_5 2 \cdot x^4$	$x^3 \log_5 16$
29	$f(x) = \frac{x^3}{5}$	$\frac{3}{5} x^2$
30	$f(x) = 3^5 \sqrt{x}$	$\frac{3}{5^5 \sqrt{x^4}}$

## prodotto di una costante per una funzione goniometrica

31	$f(x) = 5 \cdot \cos x$	$-5 \sin x$
32	$f(x) = \frac{5}{2} \cdot \cot x$	$-\frac{5}{2 \sin^2 x}$
33	$f(x) = 7 \cdot \arctan x$	$\frac{7}{1+x^2}$
34	$f(x) = \frac{\pi}{2} \cdot \sin x$	$\frac{\pi}{2} \cos x$
35	$f(x) = \sqrt{5} \cdot \tan x$	$\frac{\sqrt{5}}{\cos^2 x}$
36	$f(x) = e \cdot \arcsin x$	$\frac{e}{\sqrt{1-x^2}}$
37	$f(x) = \frac{\sqrt{3}}{2} \cdot \sin x$	$\frac{\sqrt{3}}{2} \cos x$
38	$f(x) = \sqrt[3]{7} \cdot \cos x$	$-\sqrt[3]{7} \sin x$
39	$f(x) = \frac{\tan x}{\sqrt{3}}$	$\frac{\sqrt{3}}{3 \cos^2 x}$
40	$f(x) = \pi \cdot \arccos x$	$-\frac{\pi}{\sqrt{1-x^2}}$
41	$f(x) = \sqrt[5]{\pi e} \cdot \operatorname{arccot} x$	$-\frac{\sqrt[5]{\pi e}}{1+x^2}$
42	$f(x) = 2 \cdot (\sec x)^{-1}$	$-2 \sin x$
43	$f(x) = \frac{3}{5} \pi \cdot (\csc x)^{-1}$	$\frac{3}{5} \pi \cos x$
44	$f(x) = \frac{5}{\sqrt[3]{5^2}} \cdot \frac{\csc x}{\sec x}$	$-\frac{\sqrt[3]{5}}{\sin^2 x}$

## somma di funzioni

45	$f(x) = x^2 - 3x + 15$	$2x - 3$
46	$f(x) = x^5 - x^4 - x^3$	$5x^4 - 4x^3 - 3x^2$
47	$f(x) = x^2 - 2x - 1$	$2x - 2$
48	$f(x) = 8x^2 + 1$	$16x$
49	$f(x) = x^7 + x^6$	$7x^6 + 6x^5$
50	$f(x) = x^2 + 5x - 3$	$2x + 5$
51	$f(x) = 25x^2 - 1$	$50x$
52	$f(x) = x^3 + x + 1$	$3x^2 + 1$
53	$f(x) = x^2 + 2x$	$2x + 2$
54	$f(x) = \frac{x}{2} + 3x - \frac{1}{3}$	$\frac{7}{2}$
55	$f(x) = 9x^6 + 8x^2 - 12x + 7$	$54x^5 + 16x - 12$
56	$f(x) = -\frac{5}{4}x^3 + \frac{7}{2}x^2 + \frac{3}{5}x - 29$	$-\frac{15}{4}x^2 + 7x + \frac{3}{5}$
57	$f(x) = \frac{8}{7}x^{\frac{7}{8}} - \frac{5}{6}x^{\frac{6}{5}} + \frac{2}{3}x^{\frac{3}{2}} - 1$	$x^{-\frac{1}{8}} - x^{\frac{1}{5}} + x^{\frac{1}{2}}$
58	$f(x) = \ln x + \sqrt{x}$	$\frac{1}{x} + \frac{1}{2\sqrt{x}}$

59	$f(x) = \ln(7x^2)$	$\frac{2}{x}$
60	$f(x) = \ln\left(\frac{5}{x^2}\right)$	$-\frac{2}{x}$
61	$f(x) = 3\sqrt{x} - \frac{1}{2}e^x + \pi$	$\frac{3}{2\sqrt{x}} - \frac{1}{2}e^x$
62	$f(x) = \sqrt{3}x^3 + 5\sqrt[5]{x} + 12x^{\frac{1}{4}}$	$3\sqrt{3}x^2 + \frac{1}{\sqrt[5]{x^4}} + \frac{3}{4\sqrt{x^3}}$
63	$f(x) = \sqrt{3}e^x - \sqrt{8} \cdot \log_{\frac{1}{2}}x$	$\sqrt{3}e^x - \frac{\sqrt{8}}{x} \log_{\frac{1}{2}}e$
64	$f(x) = \log_{10}x + 2 \cdot e^x + 3x - 4$	$\frac{1}{x} \log_{10}e + 2e^x + 3$
65	$f(x) = 6\sqrt[3]{x} - \log_{\frac{1}{3}}x + 8^x$	$\frac{2}{\sqrt[3]{x^2}} - \frac{1}{x} \log_{\frac{1}{3}}e + 8^x \ln 8$
66	$f(x) = \sqrt{x} + \sqrt[3]{x} - \sqrt[4]{x}$	$\frac{1}{2\sqrt{x}} + \frac{1}{3\sqrt[3]{x^2}} + \frac{1}{4\sqrt[4]{x^3}}$
67	$f(x) = \ln x - e^x - 3x^{-3} - x\sqrt[3]{x^2} - 9x$	$\frac{1}{x} - e^x + \frac{9}{x^4} - \frac{5}{3}\sqrt[3]{x^2} - 9$
68	$f(x) = \frac{3}{x^5} - \frac{5}{x^4} + \frac{2}{x^2} - \frac{1}{x}$	$\frac{1}{x^2} - \frac{4}{x^3} + \frac{20}{5} - \frac{15}{x^6}$
69	$f(x) = \frac{x^2}{\sqrt{x}} + \frac{7}{\sqrt[3]{x}} - \frac{3}{x}$	$\frac{3\sqrt{x}}{2} - \frac{7}{3x\sqrt[3]{x}} + \frac{3}{x^2}$
70	$f(x) = 5x^5 - \frac{5}{x^5} + \frac{5\sqrt[5]{x^3}}{\sqrt[3]{x^2}} - \frac{5}{x^{-5}}$	$10x + 25x^{-6} - \frac{1}{3x\sqrt[15]{x}} - 25x^4$
71	$f(x) = 8 \ln x - 2\sqrt[5]{\sqrt[3]{x^6}} + 7x^{-\frac{3}{4}}$	$\frac{8}{x} - \frac{4}{5\sqrt[5]{x^3}} - \frac{21}{4 x \sqrt[4]{x^3}}$
72	$f(x) = 4e^x + \frac{3}{4}x^{-1} - x - 9x^5$	$4e^x - \frac{3}{4}x^{-2} - 1 - 45x^4$

## somma di funzioni goniometriche

73	$f(x) = e^x - 1 - \cos x$	$e^x + \sin x$
74	$f(x) = \tan x - \cos x$	$\frac{1}{\cos^2 x} + \sin x$
75	$f(x) = 3 \cot x + 3 \pi^3 - 1$	$-\frac{3}{\sin^2 x}$
76	$f(x) = x + \cos x$	$1 - \sin x$
77	$f(x) = \sqrt{5} \tan x + \sin x$	$\sqrt{5} \frac{1}{\cos^2 x} + \cos x$
78	$f(x) = 3 \sin x - 8 \cos x + 3 x^8$	$3 \cos x + 8 \sin x + 24 x^7$
79	$f(x) = x^2 + 3x - 4 \cdot 2^x - \tan x$	$2x + 3 - 4 \cdot 2^x \ln 2 - \frac{1}{\cos^2 x}$
80	$f(x) = \sqrt[3]{x} - \frac{3}{5} \cdot \tan x + \ln x$	$\frac{1}{3\sqrt[3]{x^2}} - \frac{3}{5\cos^2 x} + \frac{1}{x}$
81	$f(x) = \arctan x - \frac{1}{x} + \frac{2}{x^3}$	$\frac{1}{1+x^2} + \frac{1}{x^2} - \frac{6}{x^4}$
82	$f(x) = 2e^x - \frac{1}{3} \cos x + 4 \tan x - 16 x^5$	$2e^x + \frac{1}{3} \sin x + \frac{4}{(\cos x)^2} - 80x^4$
83	$f(x) = \frac{1}{4} \ln x + x^{-4} - 2 \cot x - 3 e^x$	$\frac{1}{4x} - \frac{4}{x^5} + \frac{2}{(\sin x)^2} - 3e^x$
84	$f(x) = -5 \arctan x + 3 \operatorname{arccot} x$	$-\frac{8}{1+x^2}$
85	$f(x) = \frac{2}{\sec x}$	$-2 \sin x$
86	$f(x) = \frac{4}{3 \csc x}$	$\frac{4}{3} \cos x$

## prodotto di funzioni

87	$f(x) = x \cdot e^x$	$e^x + xe^x$
88	$f(x) = x^2 \cdot e^x - 12$	$x^2e^x + 2xe^x$
89	$f(x) = e^x \cdot x^3$	$x^3e^x + 3x^2e^x$
90	$f(x) = x^2 \cdot 2^x$	$2^x x(2 + x \ln 2)$
91	$f(x) = 3x^2 \cdot \ln x$	$3x(2 \ln x + 1)$
92	$f(x) = 7 \ln x \cdot e^x$	$7e^x \left( \frac{1}{x} + \ln x \right)$
93	$f(x) = 3^x \cdot e^{\frac{3}{2}x}$	$3^x e^{\frac{3}{2}x} \left( \ln 3 + \frac{3}{2} \right)$
94	$f(x) = x^4 \cdot \log_{\frac{2}{3}} x$	$x^3 \left( \log_{\frac{2}{3}} x^4 + \log_{\frac{2}{3}} e \right)$
95	$f(x) = (2 - x^3) \cdot \ln x$	$-3x^2 \ln x + \frac{2 - x^3}{x}$
96	$f(x) = \ln x \cdot \sqrt{x}$	$\frac{2 + \ln x}{2\sqrt{x}}$
97	$f(x) = (x^3 - 2x + 1) \cdot (x^2 + 2)$	$5x^4 + 2x - 4$
98	$f(x) = x \cdot (x - 3) \cdot \ln x$	$x(2 \ln x + 1) - 3(\ln x + 1)$
99	$f(x) = (1 - x) \cdot (1 + x) \cdot (-4 - 3x)$	$9x^2 + 8x - 3$
100	$f(x) = (3x^2 + 5x) \cdot e^x \cdot \log_{\frac{1}{2}} x$	$e^x \left[ \log_{\frac{1}{2}} x (3x^2 + 11x + 5) + \log_{\frac{1}{2}} e (3x + 5) \right]$

## prodotto di funzioni goniometriche

101	$f(x) = \tan x \cdot \cot x$	0
102	$f(x) = \cos x \cdot \sqrt{x}$	$\frac{\sqrt{x} (\cos x - 2x \sin x)}{2x}$
103	$f(x) = x^2 \cdot \tan x$	$\frac{x (\sin 2x + x)}{\cos^2 x}$
104	$f(x) = \sqrt{x^3} \cdot \sin x$	$\frac{3}{2} \sqrt{x} \sin x + \sqrt{x^3} \cos x$
105	$f(x) = 5^x \cdot \arctan x$	$5^x \left( \arctan x \cdot \ln 5 + \frac{1}{1+x^2} \right)$
106	$f(x) = (1 - \sin x) \cdot (1 + \cos x)$	$2 \sin^2 x - \sin x - \cos x - 1$
107	$f(x) = \operatorname{arccot} x \cdot (1 - x^2)$	$\frac{x^2 - 1}{x^2 + 1} - 2x \operatorname{arccot} x$
108	$f(x) = \sin x \cdot \cos x$	$\cos 2x$
109	$f(x) = 7 \cot x \cdot \sqrt[3]{x}$	$\frac{7 (\sin 2x - 6x)}{6 \sin^2 x \sqrt[3]{x^2}}$
110	$f(x) = 2x^5 \cdot 3 \tan x$	$\frac{3x^4 (5x \sin 2x + 2x)}{\cos^2 x}$
111	$f(x) = \frac{e^x \cdot \cos x}{4}$	$\frac{e^x \cdot (\cos x - \sin x)}{4}$
112	$f(x) = 3^x \cdot x^3 \cdot \sin x$	$x^2 \cdot 3^x (x \cdot \ln 3 \cdot \sin x + 3 \cdot \sin x + x \cdot \cos x)$
113	$f(x) = e^x \cdot x^2 \cdot \tan x$	$x e^x \left[ \frac{x}{\cos^2 x} + \tan x (x + 2) \right]$
114	$f(x) = (x^2 + 1) \cdot \arctan x \cdot \frac{1}{x^2}$	$\frac{1}{x} \left[ 2 \arctan x + \frac{1}{x} - \frac{2(x^2 + 1) \arctan x}{x^2} \right]$



## rapporto di funzioni

115	$f(x) = \frac{x+1}{x+2}$	$\frac{1}{(x+2)^2}$
116	$f(x) = \frac{x+3}{2x-1}$	$-\frac{7}{(2x-1)^2}$
117	$f(x) = \frac{2+x}{3x}$	$-\frac{2}{3x^2}$
118	$f(x) = -\frac{2}{1+x^2}$	$\frac{4x}{(1+x^2)^2}$
119	$f(x) = \frac{2x+3}{x^2-x}$	$\frac{-2x^2-6x+3}{(x^2-x)^2}$
120	$f(x) = \frac{x^4}{x^3+1}$	$\frac{x^6+4x^3}{(x^3+1)^2}$
121	$f(x) = \frac{x^2-x-1}{x}$	$\frac{x^2+1}{x^2}$
122	$f(x) = \frac{x^3-1}{x}$	$2x + \frac{1}{x^2}$
123	$f(x) = \frac{x^2+3x+2}{x-3}$	$\frac{x^2-6x-11}{(x-3)^2}$
124	$f(x) = \frac{2x^2-3}{x+5-x^2}$	$\frac{2x^2+14x+3}{(x+5-x^2)^2}$
125	$f(x) = \frac{x^{-1}+x^{-2}}{x^{-3}+x^{-4}}$	$2x$
126	$f(x) = \frac{1}{\sqrt{x}}$	$-\frac{1}{2x\sqrt{x}}$
127	$f(x) = \frac{1+2x\sqrt{x}}{15}$	$\frac{\sqrt{x}}{5}$
128	$f(x) = \frac{\ln x}{3x^2}$	$\frac{1-\ln x^2}{3x^3}$

129	$f(x) = \frac{2+x}{e^x}$	$-\frac{x+1}{e^x}$
130	$f(x) = \frac{\sqrt{x}}{x}$	$-\frac{1}{2x\sqrt{x}}$
131	$f(x) = \frac{e^x}{x}$	$\frac{xe^x - e^x}{x^2}$
132	$f(x) = \frac{x^2}{\ln x + 1}$	$\frac{x(2 \ln x + 1)}{(\ln x + 1)^2}$
133	$f(x) = \frac{x^2 - \ln x}{x}$	$\frac{x^2 + \ln x - 1}{x^2}$
134	$f(x) = \frac{\ln x - 3}{\ln x - 1}$	$\frac{2}{x(\ln x - 1)^2}$
135	$f(x) = \log_x 2$	$-\frac{\ln 2}{x \ln^2 x}$
136	$f(x) = \frac{\log_1 x}{\log_5 x}$	0
137	$f(x) = \frac{2x^3 + 5}{\sqrt{x}}$	$\frac{10x^3 - 5}{2x\sqrt{x}}$
138	$f(x) = \frac{\sqrt{x}}{\ln x}$	$\frac{\ln x - 2}{2\sqrt{x} \ln^2 x}$
139	$f(x) = \frac{\ln x}{\sqrt{x}}$	$-\frac{\ln x - 2}{2x\sqrt{x}}$
140	$f(x) = \frac{3^x}{\log_3 x}$	$\frac{3^x (x \cdot \ln 3 \cdot \ln x - 1)}{x \cdot \ln 3 \cdot \log_3^2 x}$
141	$f(x) = \frac{\ln x \cdot e^x}{\sqrt{x}}$	$\frac{e^x (2x \ln x - \ln x + 2)}{2x\sqrt{x}}$
142	$f(x) = \frac{e^x \cdot \sqrt{x}}{2x - 3}$	$\frac{e^x (4x^2 - 8x - 3)}{2(2x - 3)^2 \sqrt{x}}$

## rapporto di funzioni goniometriche

143	$f(x) = \frac{4e^x}{\sin x}$	$-\frac{4e^x(\cos x - \sin x)}{\sin^2 x}$
144	$f(x) = \frac{\sin x}{x}$	$\frac{x \cos x - \sin x}{x^2}$
145	$f(x) = \frac{\sin x}{\cos x}$	$\frac{1}{\cos^2 x}$
146	$f(x) = \frac{\sin x}{e^x}$	$\frac{\cos x - \sin x}{e^x}$
147	$f(x) = \frac{\tan x}{\cos x}$	$\frac{1 + \sin^2 x}{\cos^3 x}$
148	$f(x) = \frac{2 - 3 \sin x}{\sin x - \cos x}$	$\frac{3 - 2 \sin x - 2 \cos x}{1 - \sin 2x}$
149	$f(x) = \frac{\arcsin x}{\arccos x}$	$\frac{\arcsin x + \arccos x}{(\arccos^2 x) \sqrt{1 - x^2}}$
150	$f(x) = \frac{2 \sin x + 3x \cos x}{3 \sin x - 2x \cos x}$	$\frac{13(\sin x \cos x - x)}{(3 \sin x - 2x \cos x)^2}$
151	$f(x) = \sec x$	$\frac{\sin x}{\cos^2 x}$
152	$f(x) = \csc x$	$-\frac{\cos x}{\sin^2 x}$
153	$f(x) = \frac{\sin x}{\sqrt{x}}$	$\frac{2x \cos x - \sin x}{2x \sqrt{x}}$
154	$f(x) = \frac{\sqrt{x}}{\cos x}$	$\frac{2x \sin x + \cos x}{2\sqrt{x} \cos^2 x}$
155	$f(x) = \frac{\ln x}{\tan x}$	$\frac{\sin x \cos x - x \ln x}{x \sin^2 x}$
156	$f(x) = \frac{e^x}{\cot x}$	$\frac{e^x(\sin x \cos x + 1)}{\cos^2 x}$

## funzioni composte

157	$f(x) = (x^2 - 5)^2$	$4x(x^2 - 5)$
158	$f(x) = (x^2 + 1)^3$	$6x(x^2 + 1)^2$
159	$f(x) = (3x^4 - 2x^3)^3$	$3(3x^4 - 2x^3)^2(12x^3 - 6x^2)$
160	$f(x) = (9x^5 + 6x^3 - 11x - 2)^6$	$6(9x^5 + 6x^3 - 11x - 2)^5(45x^4 + 18x^2 - 11)$
161	$f(x) = \left(\frac{1}{3}x^3 - 2x^2 + 4x\right)^4$	$4\left(\frac{1}{3}x^3 - 2x^2 + 4x\right)^3 \cdot (x - 2)^2$
162	$f(x) = \sqrt{x - 1}$	$\frac{1}{2\sqrt{x - 1}}$
163	$f(x) = \sqrt{1 - x^2}$	$-\frac{x}{\sqrt{1 - x^2}}$
164	$f(x) = \sqrt{x^2 + x + 1}$	$\frac{2x + 1}{2\sqrt{x^2 + x + 1}}$
165	$f(x) = e^{7x}$	$7e^{7x}$
166	$f(x) = e^{2x} + 5x$	$2e^{2x} + 5$
167	$f(x) = e^{3x} - 1$	$3e^{3x}$
168	$f(x) = e^{3x} + \pi$	$3e^{3x}$
169	$f(x) = e^{x-1}$	$e^{x-1}$
170	$f(x) = \ln(x + 2)$	$\frac{1}{x + 2}$

171	$f(x) = \ln(8x^2 - 4)$	$\frac{4x}{2x^2 - 1}$
172	$f(x) = \ln(3x^2 + 7x + 5)$	$\frac{6x + 7}{3x^2 + 7x + 5}$
173	$f(x) = \ln(\ln x)$	$\frac{1}{x \ln x}$
174	$f(x) = (1 + \ln x)^2$	$\frac{2}{x}(1 + \ln x)$
175	$f(x) = e^{\frac{x+1}{2x+3}}$	$\frac{e^{\frac{x+1}{2x+3}}}{(2x+3)^2}$
176	$f(x) = \sqrt{e^{x^4+x^2+2x}}$	$\sqrt{e^{x^4+x^2+2x}} \cdot (2x^3 + x + 1)$
177	$f(x) = \ln(4x^2 - x) + e^{x^2-x} - \ln 5$	$\frac{8x-1}{4x^2-x} + (2x-1)e^{x^2-x}$
178	$f(x) = \ln \frac{2x-1}{x+1}$	$\frac{3}{(2x-1)(x+1)}$
179	$f(x) = e^{\frac{1+x}{x}}$	$-\frac{e^{\frac{1+x}{x}}}{x^2}$
180	$f(x) = \frac{x^2}{(x-1)^3}$	$-\frac{x^2+2x}{(x-1)^4}$
181	$f(x) = \frac{(x-1)^2}{(2x-3)^3}$	$\frac{2x(1-x)}{(2x-3)^4}$
182	$f(x) = \ln^5 x$	$\frac{5 \ln^4 x}{x}$
183	$f(x) = \ln x^5$	$\frac{5}{x}$
184	$f(x) = \ln^8 x^{10}$	$\frac{80 \ln^7 x^{10}}{x}$

185	$f(x) = e^{\sqrt{\ln x}}$	$\frac{e^{\sqrt{\ln x}}}{2x\sqrt{\ln x}}$
186	$f(x) = \ln \sqrt{e^{x^3}}$	$\frac{3x^2}{2}$
187	$f(x) = (x+1)^2 \cdot e^{x^2+2x}$	$2(x+1)(x^2+2x+2)e^{x^2+2x}$
188	$f(x) = \sqrt[3]{\ln(x^3+1)^2}$	$\frac{2x^2}{(x^3+1) \cdot \sqrt[3]{[\ln(x^3+1)^2]^2}}$
189	$f(x) = \ln\left(\frac{e^x}{e^x+1}\right)$	$\frac{1}{e^x+1}$
190	$f(x) = \ln \frac{\sqrt{1+x}}{\sqrt{1-x}}$	$\frac{1}{1-x^2}$
191	$f(x) = (x+1)^2 \cdot \ln(x+1)^2$	$2(x+1)[1+2\ln(x+1)]$
192	$f(x) = e^{\frac{x^3-x^2}{x^2+1}} \cdot (x^2+1)^2$	$xe^{\frac{x^3-x^2}{x^2+1}} \cdot (x^3+4x^2+3x+2)$
193	$f(x) = e^{2x} \ln(x+1)$	$e^{2x} \left(2\ln(x+1) + \frac{1}{x+1}\right)$
194	$f(x) = \ln\left(3\left(x + \sqrt{9+x^2}\right)\right)$	$\frac{1}{\sqrt{9+x^2}}$
195	$f(x) = \frac{e^x}{\sqrt{e^x-1}}$	$\frac{e^x(e^x-2)}{2(e^x-1)\sqrt{e^x-1}}$
196	$f(x) = \log \ln(5x+3)$	$\frac{5 \log e}{(5x+3) \ln(5x+3)}$
197	$f(x) = \sqrt{\ln x}$	$\frac{1}{2x\sqrt{\ln x}}$
198	$f(x) = \frac{3x^3}{\sqrt[3]{3x+3}}$	$\frac{x^2(8x+9)}{(x+1)\sqrt[3]{3x+3}}$

## funzioni composte goniometriche

199	$f(x) = (\sin x + 4)^5$	$5 (\sin x + 4)^4 \cos x$
200	$f(x) = 2 - x^3 \sin x$	$-x^2(x \cos x + 3 \sin x)$
201	$f(x) = \cos(3x - 1)$	$-3 \sin(3x - 1)$
202	$f(x) = e^{\sin x}$	$e^{\sin x} \cos x$
203	$f(x) = \sin(x + 1)$	$\cos(x + 1)$
204	$f(x) = \cos \frac{x}{2}$	$-\frac{1}{2} \sin \frac{x}{2}$
205	$f(x) = \sin 2x$	$2 \cos 2x$
206	$f(x) = \cot 2x$	$-2 \csc^2 2x$
207	$f(x) = 1 - 3 \sin 2x$	$-6 \cos 2x$
208	$f(x) = \cos \sqrt{x}$	$-\frac{\sin \sqrt{x}}{2\sqrt{x}}$
209	$f(x) = \tan \frac{1}{x^3}$	$-\frac{3}{x^4} \frac{1}{\cos^2 \frac{1}{x^3}}$
210	$f(x) = \arctan \sqrt{x}$	$\frac{1}{2\sqrt{x}(1+x)}$
211	$f(x) = 3^{\sin x}$	$3^{\sin x} \ln 3 \cdot \cos x$
212	$f(x) = \log_{10} \cos x$	$-\tan x \cdot \log_{10} e$

213	$f(x) = \sqrt{\sin x + 4}$	$\frac{\cos x}{2\sqrt{\sin x + 4}}$
214	$f(x) = (\sin x + 1)^2 - \sin x + \cos^2 x$	$\cos x$
215	$f(x) = (\sin x + 1)^2 + (\cos x + 1)^2 + 10\pi\sqrt{3}$	$2\cos x - 2\sin x$
216	$f(x) = 1 + 2x + \sin 3x \cdot \cos x$	$2 + 3\cos x \cos 3x - \sin x \sin 3x$
217	$f(x) = \sin \ln x$	$\frac{\cos \ln x}{x}$
218	$f(x) = \sqrt{\sin(2x - 5)}$	$\frac{\cos(2x - 5)}{\sqrt{\sin(2x - 5)}}$
219	$f(x) = 7 \arctan x$	$\frac{7 \arctan x \cdot \ln 7}{1 + x^2}$
220	$f(x) = \sin(\ln 5x)$	$\frac{\cos \ln 5x}{x}$
221	$f(x) = \arcsin \sqrt{1 - 2x}$	$-\frac{1}{\sqrt{2x(1 - 2x)}}$
222	$f(x) = (\ln \cos(1 - x))^2$	$2 \tan(1 - x) \cdot \ln \cos(1 - x)$
223	$f(x) = \tan \ln x$	$\frac{1}{x \cos^2 \ln x}$
224	$f(x) = e^{\cos^2 x}$	$-e^{\cos^2 x} \sin 2x$
225	$f(x) = \cos \ln x^2$	$-\frac{2 \sin \ln x^2}{x}$
226	$f(x) = \sin \arctan x$	$\frac{1}{(1 + x^2) \sqrt{(1 + x^2)}}$



227	$f(x) = \frac{\sin 2x}{\sqrt{\sin x}}$	$\frac{1 - 3 \sin^2 x}{\sqrt{\sin x}}$
228	$f(x) = x \cos \ln x$	$\cos \ln x - \sin \ln x$
229	$f(x) = \arccos \sin x$	$-\frac{\cos x}{ \cos x }$
230	$f(x) = \arctan \frac{3x-x^3}{1-3x^2}$	$\frac{3}{1+x^2}$
231	$f(x) = \ln \cos x$	$\tan x$
232	$f(x) = \sin^3 x$	$3 \sin^2 x \cos x$
233	$f(x) = \cos x^3$	$-3x^2 \sin x^3$
234	$f(x) = \arctan \left( \frac{x-1}{x+1} \right)$	$\frac{1}{x^2+1}$
235	$f(x) = \sqrt{\frac{1+\cos x}{1-\cos x}}$	$\frac{\sin x}{ \sin x } \cdot \frac{1}{\cos x - 1}$
236	$f(x) = \left( \frac{1}{2} \right)^{\sin \frac{x}{2}}$	$\left( \frac{1}{2} \right)^{\sin \frac{x}{2} + 1} \cdot \ln \frac{1}{2} \cdot \cos \frac{x}{2}$
237	$f(x) = \ln \cot \frac{1}{x}$	$\frac{2}{x^2 \sin \frac{2}{x}}$
238	$f(x) = \pi \tan^3 x - \sin x$	$3\pi \tan^2 x \cdot \frac{1}{\cos^2 x} - \cos x$
239	$f(x) = \ln \cos \left( \frac{x-1}{x} \right)$	$-\frac{1}{x^2} \tan \left( \frac{x-1}{x} \right)$
240	$f(x) = \ln \sqrt{\cos x} + \frac{1}{4} (\tan x)^2$	$\frac{(\tan x)^3}{2}$

## funzioni elevate a funzioni

241	$f(x) = x^x$	$x^x \cdot (1 + \ln x)$
242	$f(x) = x^{2x}$	$2x^{2x} \cdot (\ln x + 1)$
243	$f(x) = x^{5x}$	$5x^{5x} \cdot (\ln x + 1)$
244	$f(x) = x^{\ln x}$	$2x^{\ln x} \frac{\ln x}{x}$
245	$f(x) = x^{2x+1}$	$x^{2x+1} \cdot \left(2 \ln x + \frac{2x+1}{x}\right)$
246	$f(x) = (x^2 - 1)^{x+1}$	$(x^2 - 1)^{x+1} \cdot \left(\ln(x^2 - 1) + \frac{2x}{x-1}\right)$
247	$f(x) = (\sqrt{x})^{e^x}$	$(\sqrt{x})^{e^x} \cdot \left[e^x \left(\ln \sqrt{x} + \frac{1}{2x}\right)\right]$
248	$f(x) = x^{\sqrt{x}}$	$x^{\sqrt{x}} \cdot \left(\frac{\ln x}{2\sqrt{x}} + \frac{\sqrt{x}}{x}\right)$
249	$f(x) = (a^x)^x \quad a > 0$	$(a^x)^x \cdot (\ln a^x + x \ln a)$

## funzioni elevate a funzioni goniometriche


254	$f(x) = (\sin x)^x$	$(\sin x)^x \cdot (\ln \sin x + x \cot x)$
255	$f(x) = (x)^{\sin x}$	$\frac{(x)^{\sin x}}{x} \cdot (\sin x + x \cos x \ln x)$
256	$f(x) = (\sin x)^{\sqrt{x}}$	$(\sin x)^{\sqrt{x}} \cdot \left(\frac{\ln \sin x}{2\sqrt{x}} + \sqrt{x} \cot x\right)$
257	$f(x) = (\sin x)^{\cos x}$	$(\sin x)^{\cos x} \cdot \left(-\sin x \cdot \ln \sin x + \frac{(\cos x)^2}{\sin x}\right)$
258	$f(x) = (\arctan x)^{1+x^2}$	$(\arctan x)^{1+x^2} \cdot \left(2x \ln(\arctan x) + \frac{1}{\arctan x}\right)$

## derivate di riepilogo

259	$f(x) = \pi^{3x}$	$\pi^{3x} \ln \pi^3$
260	$f(x) = \frac{2x + 1}{x - 2}$	$-\frac{5}{(x - 2)^2}$
261	$f(x) = \sqrt{3} \cdot e^x$	$\sqrt{3} \cdot e^x$
262	$f(x) = x^2 \cdot \sqrt{3 - x^2}$	$\frac{6x - 3x^3}{\sqrt{3 - x^2}}$
263	$f(x) = -x^4 + \frac{1}{3}x^3$	$-4x^3 + x^2$
264	$f(x) = \frac{x}{\sqrt{2x - 3}}$	$\frac{x - 3}{\sqrt{(2x - 3)^3}}$
265	$f(x) = \ln(2) \cdot x^{-3} - 10^5 \cdot x^{\frac{3}{5}}$	$-\frac{3}{x} \left(1 + 2 \cdot 10^5 x^{\frac{3}{5}}\right)$
266	$f(x) = \frac{7}{11} \cdot \left(\frac{1}{2}\right)^x$	$\frac{7}{11} \cdot \left(\frac{1}{2}\right)^x \ln \frac{1}{2}$
267	$f(x) = \log_2 x + \log_3 x + \log_4 x$	$\frac{1}{x} \left(\frac{1}{\ln 2} + \frac{1}{\ln 3} + \frac{1}{\ln 4}\right)$
268	$f(x) = \frac{x^2}{x - 1}$	$\frac{x^2 - 2x}{(x - 1)^2}$
269	$f(x) = \frac{x^2 + 1}{x^2 - 1}$	$-\frac{4x}{(x^2 - 1)^2}$
270	$f(x) = \frac{e^x}{x^2}$	$e^x \cdot \frac{x - 2}{x^3}$
271	$f(x) = e^{\frac{1}{\ln x}}$	$-\frac{e^{\frac{1}{\ln x}}}{x \ln^2 x}$
272	$f(x) = \sqrt{8} \cdot \log_{\frac{1}{2}} x$	$\frac{\sqrt{8}}{x} \cdot \log_{\frac{1}{2}} e$

273	$f(x) = 3x \cdot \ln x - (1 + \ln x)^3$	$\frac{3}{x}[x - 1 - \ln^2 x + \ln x(x - 2)]$
274	$f(x) = (10^3 \log_3 x) \cdot \left(\frac{\sqrt{2}}{2} \ln x\right) - \pi 5^x$	$\frac{\sqrt{2} \cdot 10^3}{x} \log_3 x - \pi 5^x \ln 5$
275	$f(x) = (x + \sqrt{x}) \cdot (2 - \sqrt{x})$	$\frac{2\sqrt{x} - 3x + 2}{2\sqrt{x}}$
276	$f(x) = 4 \cdot \log_2 x$	$\frac{4}{x} \cdot \log_2 e$
277	$f(x) = x + \sqrt{x} + e^{x+\sqrt{x}}$	$\left(1 + \frac{1}{2\sqrt{x}}\right)(1 + e^{x+\sqrt{x}})$
278	$f(x) = \frac{e^x}{x^2} - x^2 \cdot 2^x$	$e^x \frac{x-2}{x^3} - x2^x(2+x \ln 2)$
279	$f(x) = \frac{1 + \sqrt{x}}{1 - \sqrt{x}}$	$\frac{1}{\sqrt{x}(1 - \sqrt{x})^2}$
280	$f(x) = x^{\frac{1}{x}} - \frac{\ln x}{x} + \frac{7\sqrt{\pi}}{2e}$	$\frac{1 - \ln x}{x^2} \left(x^{\frac{1}{x}} - 1\right)$
281	$f(x) = \ln^{\sqrt{x}} x$	$\ln^{\sqrt{x}} x \left(\frac{\ln \ln x}{2\sqrt{x}} + \frac{\sqrt{x}}{x \ln x}\right)$
282	$f(x) = 3^{3x-2} + \log_3 6x$	$\frac{3^{3x-1} \cdot (\ln 3)^2 + 1}{6x \ln 3}$
283	$f(x) = \left(\frac{2x-1}{x^2-2x}\right)^4$	$-\frac{8(2x-1)^3(x^2-x+1)}{(x^2-2x)^5}$
284	$f(x) = e^x \cdot (2(x-1) - x^2)$	$-x^2 e^x$
285	$f(x) = \sqrt{\ln(x^3 - 3x + 2)}$	$\frac{3x+3}{2(x^2+x-2)\sqrt{\ln(x^3-3x+2)}}$
286	$f(x) = 2x\sqrt{1+4x^2} + \ln(2x + \sqrt{1+4x^2}) - \frac{3}{4}$	$4\sqrt{1+4x^2}$

287	$f(x) = e^{e^x}$	$e^{e^x+x}$
288	$f(x) = \ln \ln x$	$\frac{1}{x \ln x}$
289	$f(x) = (e^x + 3)^x$	$\left(\ln(e^x + 3) + \frac{xe^x}{e^x + 3}\right)(e^x + 3)^x$
290	$f(x) = (\ln x)^{\ln x}$	$\frac{1}{x}(\ln x)^{\ln x} (\ln(\ln x) + 1)$
291	$f(x) = \frac{(2x + 1)^3}{x^4}$	$\frac{-2(2x + 1)^2(x + 2)}{x^5}$
292	$f(x) = \frac{3}{\sqrt[3]{2 + x^2}}$	$-\frac{2x}{(2 + x^2)^{\frac{4}{3}} \sqrt[3]{2 + x^2}}$
293	$f(x) = \log_a(x^2 + 3)$ con $a > 0 \wedge a \neq 1$	$\frac{2x}{(x^2 + 3) \ln a}$
294	$f(x) = \frac{\sqrt{x+1} - \sqrt{x-1}}{\sqrt{x+1} + \sqrt{x-1}}$	$\frac{\sqrt{x^2-1} - x}{\sqrt{x^2-1}}$
295	$f(x) = \ln^3 x^3$	$\frac{9 \ln^2 x^3}{x}$
296	$f(x) = \ln^6 x^5$	$\frac{30 \ln^5 x^5}{x}$
297	$f(x) = \ln \sqrt{e^{3x}}$	$\frac{3}{2}$
298	$f(x) = (x + 2)^{\ln x}$	$(x + 2)^{\ln x} \cdot \left(\frac{\ln(x + 2)}{x} + \frac{\ln x}{x + 2}\right)$
299	$f(x) = \ln \sqrt{\frac{x + 1}{2 - x}}$	$\frac{3}{-2x^2 + 2x + 4}$
300	$f(x) = \ln(x^3 + x^2 + 8)$	$\frac{3x^2 + 2x}{x^3 + x^2 + 8}$

301	$f(x) = \ln(5 e^x \sqrt{x^2 - 1})$	$\frac{x^2 + x - 1}{x^2 - 1}$
302	$f(x) = \frac{1}{2} \ln(x^2 - 1) + x$	$\frac{x^2 + x - 1}{x^2 - 1}$
303	$f(x) = \ln \ln \ln 2^x$	$\frac{1}{x \ln \ln 2}$
304	$f(x) = \frac{\sqrt{x+1} - \sqrt{x-1}}{\sqrt{x+1} + \sqrt{x-1}} + \ln x^2 - 4\sqrt{x}$	$1 - \frac{x}{\sqrt{x^2 - 1}} + \frac{2(1 - \sqrt{x})}{x}$
305	$f(x) = \frac{1}{a+b} \ln \frac{a+bx}{ax+b}$ con $a, b \in \mathbb{R}^+$	$\frac{b-a}{(a+bx) \cdot (ax+b)}$
306	$f(x) = (a+nx)^{\frac{n+1}{n}}$ con $a, x, n > 0$	$(n+1) \cdot (a+nx)^{\frac{1}{n}}$
307	$f(x) =  5x^2 - 3x + 1 $	$\frac{50x^3 - 45x^2 + 19x - 3}{ 5x^2 - 3x + 1 }$
308	$f(x) =  3x + 1 $	$\frac{9x + 3}{ 3x + 1 }$
309	$f(x) = \frac{ x^2 - 1 }{2x + 1}$	$\frac{2x^4 + 2x^3 - 2x - 2}{ x^2 - 1  (2x + 1)^2}$
310	$f(x) = \sqrt{ \ln x }$	$\frac{\ln x}{2x  \ln x  \sqrt{ \ln x }}$
311	$f(x) = \sqrt{\ln x }$	$\frac{1}{2x \sqrt{\ln x }}$
312	$f(x) =  \sqrt{\ln x} $	$\frac{1}{2x \sqrt{\ln x}}$
313	$f(x) = \frac{(x+1)^2}{(x+2)^3 (x+3)^4}$	$-\frac{(x+1)(5x^3 + 14x + 5)}{(x+2)^4 (x+3)^5}$
314	$f(x) = \frac{\sqrt[5]{(x-1)^2}}{\sqrt[4]{(x-2)^3} \sqrt[3]{(x-3)^7}}$	 $\frac{-161x^2 + 480x - 271}{60 \sqrt[5]{(x-1)^3} \sqrt[4]{(x-2)^7} \sqrt[3]{(x-3)^{10}}}$

## derivate di riepilogo di funzioni goniometriche

315	$f(x) = \sqrt{e} \cdot \sin \frac{2}{3}\pi$	0
316	$f(x) = \frac{1}{2} \cdot \sin^5 x$	$\frac{5}{2} \sin^4 x \cdot \cos x$
317	$f(x) = \frac{1}{2} \cdot \cos^2 x$	$-\sin x \cdot \cos x$
318	$f(x) = 3 + \sin x - \cot x + 8$	$\cos x + \frac{1}{\sin^2 x}$
319	$f(x) = \sin x + 2 \cos x - \operatorname{arccot} x + 8 \tan x$	$\cos x - 2 \sin x + \frac{1}{\sin^2 x} + 8 \frac{1}{\cos^2 x}$
320	$f(x) = \tan x \cdot (1 - \sin^2 x + \cos^2 x)$	$2 \cos 2x$
321	$f(x) = e^{\arcsin x}$	$\frac{e^{\arcsin x}}{\sqrt{1-x^2}}$
322	$f(x) = \frac{1}{4} e^{\sqrt[3]{\sin 2x^2}}$	$\frac{x \cos 2x^2}{3 \cdot \sqrt[3]{(\sin 2x^2)^2}} \cdot e^{\sqrt[3]{\sin 2x^2}}$
323	$f(x) = \cos x \cdot (1 + \tan x)$	$\cos x - \sin x$
324	$f(x) = \sin \ln \arcsin x$	$\frac{\cos(\ln \arcsin x)}{\arcsin x \sqrt{1-x^2}}$
325	$f(x) = (1 + \tan x) \cdot (1 - \cot x)$	$\frac{1}{\sin^2 x \cos^2 x}$
326	$f(x) = \sqrt{3} \cdot x + \arcsin x^2$	$\frac{2x + \sqrt{3(1-x^4)}}{\sqrt{1-x^4}}$
327	$f(x) = \arctan \ln x + \ln \arctan x$	$\frac{1}{x(1+\ln^2 x)} + \frac{1}{(1+x^2) \arctan x}$
328	$f(x) = \frac{\cos(\ln \arcsin 1)}{\sqrt{1-e^2} \arcsin(-1)} - e^x (1 - e^x) x$	$e^x (2xe^x + e^x - x - 1)$

329	$f(x) = \cot \frac{1}{\sqrt{x}} + \frac{\pi}{2} \ln x$	$\frac{1}{2x\sqrt{x}} \sin^2 \frac{1}{\sqrt{x}} + \frac{\pi}{2x}$
330	$f(x) = \ln \sqrt{\frac{1 + \sin x}{1 - \sin x}}$	$\frac{1}{\cos x}$
331	$f(x) = \log_2 \sin x + \frac{\pi}{2} \cdot \tan x$	$\frac{\cot x}{\ln 2} + \frac{\pi}{2 \cos^2 x}$
332	$f(x) = \arcsin \left( \frac{x}{\sqrt{1+x^2}} \right)$	$\frac{1}{1+x^2}$
333	$f(x) = \frac{1 - \tan x}{\sin x - \cos x}$	$-\sec x \cdot \tan x$
334	$f(x) = x \cdot \arcsin x + \sqrt{1-x^2}$	$\arcsin x$
335	$f(x) = \ln(\sin x + \cos x) - \ln(\tan x + 1)$	$-\tan x$
336	$f(x) = \arctan e^x + e^{\arctan x}$	$\frac{e^x}{1+e^{2x}} + \frac{e^{\arctan x}}{1+x^2}$
337	$f(x) = x \cdot \cos x \cdot \ln x$	$\ln x (\cos x - x \sin x) + \cos x$
338	$f(x) = \arcsin x + \sqrt{1-x^2}$	$\frac{1-x}{\sqrt{1-x^2}}$
339	$f(x) = \ln \sin x$	$\cot x$
340	$f(x) = \sin x^3$	$3x^2 \cos x^3$
341	$f(x) = \cos^3 x$	$-3 \cos^2 x \sin x$
342	$f(x) = \cos^5 x^5$	$-25 x^4 \cos^4 x^5 \sin x^5$



343	$f(x) = \tan^7 x^3$	$\frac{21 x^2 \sin^6 x^3}{\cos^8 x^3}$
344	$f(x) = \arcsin \cos x$	$-\frac{\sin x}{ \sin x }$
345	$f(x) = \arcsin \arctan e^x$	$\frac{e^x}{(1 + e^{2x}) \sqrt{1 - \arctan^2 e^x}}$
346	$f(x) = e^{x^2-x} \cos^3 x^2$	$e^{x^2-x} \cos^2 x^2 [(2x - 1) \cos x^2 - 6x \sin x^2]$
347	$f(x) = \sin x^2 \cos x^3$	$x [2 \cos(x^2) \cos(x^3) - 3x \sin(x^2) \sin(x^3)]$
348	$f(x) = \frac{1}{\arccos x^2} + \sin x^\pi$	$\frac{2x}{\arccos^2(x^2) \sqrt{1-x^4}} + \pi x^{\pi-1} \cos x^\pi$
349	$f(x) = x e^{2 \cos x^2}$	$e^{2 \cos x^2} \cdot (1 - x^2 2^{1+\cos x^2} \sin(x^2) \ln 2)$
350	$f(x) = \sin x^{\cos x}$	$(\sin x)^{\cos(x)-1} \cdot (\cos^2 x - \sin^2 x \ln \sin x)$
351	$f(x) = \cos x^{x+1}$	$-x^{x+1} \cdot \sin x^{x+1} \cdot \left(\ln x + \frac{x+1}{x}\right)$
352	$f(x) = \frac{1}{\sin^3 3x}$	$\frac{-9 \cos 3x}{\sin^4 3x}$
353	$f(x) = \log_3(1 + \sin^2 x)$	$\frac{\sin 2x}{(1 + \sin^2 x) \ln 3}$
354	$f(x) = \arctan \frac{1}{\sqrt{x^2-1}} + \sqrt{x^2-1}$	$\frac{\sqrt{x^2-1}}{x}$
355	$f(x) = \tan e^{x^2+3}$	$\frac{2 x e^{x^2+3}}{\cos^2 e^{x^2+3}}$
356	$f(x) = \ln(2 \sin x + \sin 2x)^2$	$\frac{4 (\cos x + \cos 2x)}{2 \sin x + \sin 2x}$

357	$f(x) = \arcsin \frac{x}{a}$ con $a > 0$	$\frac{1}{\sqrt{a^2 - x^2}}$
359	$f(x) = \arccos \frac{1}{\sqrt{1+x^2}}$	$\frac{x}{ x (1+x^2)}$
359	$f(x) = \left(\sin \frac{\pi}{6}\right)^{\arctan \sqrt{x}}$	$-\frac{\ln 2}{2^{1+\arctan \sqrt{x}} \cdot \sqrt{x}(1+x)}$
360	$f(x) = \left(\tan \frac{\pi}{3}\right)^{2 \sin^2 2x}$	$3^{\sin^2 2x} \cdot \sin 4x \cdot \ln 9$
361	$f(x) = \arctan \frac{2 - \cos x}{1 + \cos x} - \frac{3}{2} \ln(2 \cos^2 x - 2 \cos x + 5)$	$\frac{3 \sin 2x}{2 \cos^2 x - 2 \cos x + 5}$
362	$f(x) = \ln \sqrt{\frac{1 - \sin x}{1 + \sin x}}$	$-\frac{1}{\cos x}$
363	$f(x) = \arctan \left(\frac{x^2 - 2x - 1}{x^2 + 2x + 1}\right)$	$\frac{2x(x+1)}{x^2 + 1}$
364	$f(x) = \sin 2x + \frac{x^2 + 4x - 4}{x + 2}$	$2 \cos 2x + \frac{x^2 + 4x + 12}{(x+2)^2}$
365	$f(x) = \sqrt{x} \tan \sqrt{x}$	$\frac{\tan^2 \sqrt{x}}{2} + \frac{\sqrt{x} \tan \sqrt{x}}{2x} + \frac{1}{2}$
366	$f(x) = \sqrt{1 + \sin 2x}$	$\frac{\cos 2x}{\sin x + \cos x}$
367	$f(x) = \sin 2x + \cos 2x + 2x$	$4 \cos x (\cos x - \sin x)$
368	$f(x) = \ln \left(\frac{1+x}{1-x}\right)^{\frac{1}{4}} - \frac{1}{2} \arctan x$	$\frac{x^2}{1-x^4}$
369	$f(x) = \arcsin \sqrt{\sin x}$	$\frac{\cos x}{2 \sqrt{\sin x - \sin^2 x}}$
370	$f(x) = \frac{1}{3} \ln \frac{x+1}{\sqrt{x^2-x+1}} + \frac{1}{\sqrt{3}} \arctan \frac{2x-1}{\sqrt{3}}$	$\frac{1}{1+x^3}$

371	$f(x) = \arctan \frac{4 \sin x}{3 + 5 \cos x}$	$\frac{4}{5 + 3 \cos x}$
372	$f(x) = \ln \frac{x^2 + \sqrt{2} x + 1}{x^2 - \sqrt{2} x + 1} + 2 \arctan \frac{\sqrt{2} x}{1 - x^2}$	$\frac{4\sqrt{2}}{1 + x^4}$
373	$f(x) = \arctan \frac{\cos x}{\sqrt{1 + (\sin x)^2}} - \ln(\sin x + \sqrt{1 + (\sin x)^2})$	$-\frac{\sin x + \cos x}{\sqrt{1 + \sin^2 x}}$
374	$f(x) = \begin{cases} x^2 & x \leq 0 \\ 2 + x - 2 \cos x & x > 0 \end{cases}$	$f'(x) = \begin{cases} 2x & x < 0 \\ 1 + 2 \sin x & x > 0 \end{cases}$
375	$f(x) = (\sin x)^{-\cos x}$	$\frac{\sin x^{\cos x}}{\sin x} (\sin^2 x \cdot \ln \sin x - \cos^2 x)$
376	$f(x) = \sin x^{\ln x}$	$2 \frac{\ln x \cdot x^{\ln x} \cos x^{\ln x}}{x}$
377	$f(x) = e^{x^x}$	$e^{x^x} (1 + \ln x) x^x$
378	$f(x) =  \sin x $	$\frac{\sin x \cos x}{ \sin x }$
379	$f(x) = \sin x $	$\frac{ x  \cos x}{ x }$
380	$f(x) =  \cos x^2 $	$-\frac{x \sin 2x^2}{ \cos x^2 }$
381	$f(x) =  \cos^2 x $	$-2 \sin x \cos x$
382	$f(x) = \cos^2 x $	$-\frac{x \sin 2 x }{ x }$
383	$f(x) = \ln \tan x  + 4 \sin x$	$\frac{1 + 4 \sin x \cos^2 x}{\sin x \cos x}$
384	$f(x) = \ln \ln \sin x $	$\frac{\cot x}{\ln \sin x}$

calcolare la derivata **seconda** delle seguenti funzioni

385	$f(x) = \frac{1}{x}$	$f''(x) = \frac{2}{x^3}$
386	$f(x) = \frac{x-1}{x}$	$f''(x) = -\frac{2}{x^3}$
387	$f(x) = \sqrt{x}$	$f''(x) = -\frac{1}{4\sqrt{x^3}}$
388	$f(x) = \sqrt[3]{x}$	$f''(x) = -\frac{2}{9\sqrt[3]{x^5}}$
389	$f(x) = e^x$	$f''(x) = e^x$
390	$f(x) = 3e^x + \ln x + x^2$	$f''(x) = 3e^x - \frac{1}{x^2} + 2$
391	$f(x) = x x $	$f''(x) = 2\frac{ x }{x}$

calcolare la derivata **seconda** delle seguenti funzioni goniometriche

392	$f(x) = \sin x + \cos x$	$f''(x) = -\cos x - \sin x$
393	$f(x) = x \sin x + 3x^2$	$f''(x) = 6 + 2 \cos x - \sin x$
394	$f(x) = x^2 \sin x$	$f''(x) = (2 - x^2) \sin x + 4x \cos x$
395	$f(x) = x^3 - \sin^2 x$	$f''(x) = 6x - 2 \cos 2x$
396	$f(x) = e^x \cos x$	$f''(x) = -2e^x \sin x$
397	$f(x) = \ln \sin x$	$f''(x) = -\frac{1}{\sin^2 x}$

calcolare la derivata terza delle seguenti funzioni

398	$f(x) = x^2 + 2x$	$f'''(x) = 0$
399	$f(x) = x^5 + 2x + \frac{1}{2}$	$f'''(x) = 20x^2$
400	$f(x) = 2x^4 - 3x^3 + 15$	$f'''(x) = 48x - 18$
401	$f(x) = \frac{x^2}{x+1}$	$f'''(x) = -\frac{6}{(x+1)^4}$
402	$f(x) = 3x^2 - 8x + 2$	$f'''(x) = 0$
403	$f(x) = \ln x$	$f'''(x) = \frac{2}{x^3}$
404	$f(x) = e^x$	$f'''(x) = e^x$
405	$f(x) = 3e^x + \ln x + x^2$	$f'''(x) = 3e^x + \frac{2}{x^3}$

calcolare la derivata terza delle seguenti funzioni goniometriche

406	$f(x) = \sin x + \cos x$	$f'''(x) = -\cos x + \sin x$
407	$f(x) = x \sin x + 3x^2$	$f'''(x) = -x \cos x - 3 \sin x$
408	$f(x) = x^3 - \sin^2 x$	$f'''(x) = 6 + 4 \sin 2x$
409	$f(x) = e^x \cos x$	$f'''(x) = -2e^x (\sin x + \cos x)$
410	$f(x) = \ln \sin x$	$f'''(x) = \frac{2 \cos x}{\sin^3 x}$