

trasforma i seguenti numeri complessi dalla forma algebrica alla forma trigonometrica		
1	$2 + 2i$	$2\sqrt{2} \left(\cos \frac{\pi}{4} + i \sin \frac{\pi}{4} \right)$
2	$1 - \sqrt{3}i$	$2 \left(\cos \frac{5}{3}\pi + i \sin \frac{5}{3}\pi \right)$
3	8	$8(\cos 0\pi + i \sin 0\pi)$
4	-13	$13(\cos \pi + i \sin \pi)$
5	$7i$	$7 \left(\cos \frac{\pi}{2} + i \sin \frac{\pi}{2} \right)$
6	$\sqrt{2}i$	$\sqrt{2} \left(\cos \frac{\pi}{2} + i \sin \frac{\pi}{2} \right)$
7	$-\frac{\sqrt{5}}{3}i$	$\frac{\sqrt{5}}{3} \left(\cos \frac{3}{2}\pi + i \sin \frac{3}{2}\pi \right)$
8	i	$\left(\cos \frac{\pi}{2} + i \sin \frac{\pi}{2} \right)$
9	$13i$	$13 \left(\cos \frac{\pi}{2} + i \sin \frac{\pi}{2} \right)$
10	$-5i$	$5 \left(\cos \frac{3\pi}{2} + i \sin \frac{3\pi}{2} \right)$
11	$1 - i$	$\sqrt{2} \left(\cos \frac{7}{4} + i \sin \frac{7}{4}\pi \right)$
12	$1 + \sqrt{3}i$	$2 \left(\cos \frac{\pi}{3} + i \sin \frac{\pi}{3} \right)$
13	$-3 - \sqrt{3}i$	$2\sqrt{3} \left(\cos \frac{7}{6}\pi + i \sin \frac{7}{6}\pi \right)$
14	$-\frac{7}{3} - \frac{7}{3}i$	$\frac{7}{3}\sqrt{2} \left(\cos \frac{5}{4}\pi + i \sin \frac{5}{4}\pi \right)$
15	$2 + i$	$\sqrt{5}(\cos 29^\circ 31' + i \sin 29^\circ 31')$
16	$-1 + i$	$\sqrt{2} \left(\cos \frac{3\pi}{4} + i \sin \frac{3\pi}{4} \right)$
17	$3 + \sqrt{3}i$	$2\sqrt{3} \left(\cos \frac{\pi}{6} + i \sin \frac{\pi}{6} \right)$
18	$3 - \sqrt{3}i$	$2\sqrt{3} \left(\cos \frac{11\pi}{6} + i \sin \frac{11\pi}{6} \right)$
19	$-25 - 25i$	$25\sqrt{2} \left(\cos \frac{5\pi}{4} + i \sin \frac{5\pi}{4} \right)$

20	$2\sqrt{2} - 2\sqrt{2}i$	$4\left(\cos\frac{7\pi}{4} + i\sin\frac{7\pi}{4}\right)$
21	$-12 - 4\sqrt{3}i$	$8\sqrt{3}\left(\cos\frac{7\pi}{6} + i\sin\frac{7\pi}{6}\right)$
22	$-\sqrt{2} + \sqrt{6}i$	$2\sqrt{2}\left(\cos\frac{2}{3}\pi + i\sin\frac{2}{3}\pi\right)$
23	$5 + 5\sqrt{3}i$	$10\left(\cos\frac{\pi}{3} + i\sin\frac{\pi}{3}\right)$
24	$\sqrt{11} - i\sqrt{33}$	$2\sqrt{11}\left(\cos\frac{5}{3}\pi + i\sin\frac{5}{3}\pi\right)$
25	$-(a+b)\sqrt{3} + (a+b)i$ con $a, b \in R^+$	$2(a+b)\left(\cos\frac{5}{6}\pi + i\sin\frac{5}{6}\pi\right)$
26	$-3\sqrt{e} - 3\sqrt{3}ei$ con "e" numero di Nepero	$6\sqrt{e}\left(\cos\frac{4}{3}\pi + i\sin\frac{4}{3}\pi\right)$
27	$\log_{\frac{1}{2}}64 + i\log_{\sqrt{3}}27$	$6\sqrt{2}\left(\cos\frac{3\pi}{4} + i\sin\frac{3\pi}{4}\right)$
28	$\frac{3}{2} - \frac{\sqrt{3}}{2}i$	$\sqrt{3}\left(\cos\frac{11\pi}{6} + i\sin\frac{11\pi}{6}\right)$
29	$-\frac{71}{4}$	$\frac{71}{4}(\cos\pi + i\sin\pi)$

trasforma i seguenti numeri complessi dalla forma algebrica alla forma esponenziale

30	$\sqrt{3} + i$	$2e^{\frac{\pi}{6}i}$
31	$\sqrt{7} - \sqrt{21}i$	$2\sqrt{7}e^{\frac{5\pi}{3}i}$
32	$-\frac{1}{2} + \frac{\sqrt{3}}{2}i$	$e^{\frac{2\pi}{3}i}$
33	$2\sqrt{3} - 2i$	$4e^{\frac{11\pi}{6}i}$
34	3	$3e^{0i}$
35	$7 - 7i$	$7\sqrt{2}e^{\frac{7\pi}{4}i}$
36	$\frac{1 + \sqrt{3}i}{2}$	$e^{\frac{\pi}{3}i}$
37	$-\sqrt{12} - 6i$	$4\sqrt{3}e^{\frac{4\pi}{3}i}$
38	$-\pi + \pi i$	$\pi\sqrt{2}e^{\frac{3\pi}{4}i}$

39	$-28i$	$28e^{\frac{3\pi}{2}i}$
40	$-\frac{2}{\sqrt{3}} + 2i$	$4\frac{\sqrt{3}}{3}e^{\frac{2\pi}{3}i}$
41	$12 + 16i$	$20e^{53,13^\circ i}$

trasforma i seguenti numeri complessi nella forma algebrica

42	$2\left(\cos\frac{2\pi}{3} + i\sin\frac{2\pi}{3}\right)$	$-1 + \sqrt{3}i$
43	$3e^{\frac{3\pi}{4}i}$	$-\frac{3}{2}\sqrt{2} + \frac{3\sqrt{2}}{2}i$
44	$\frac{1}{\sqrt{3}}\left(\cos\frac{\pi}{3} + i\sin\frac{\pi}{3}\right)$	$\frac{\sqrt{3}}{6} + \frac{1}{2}i$
45	$\frac{2}{3}e^{\frac{5\pi}{3}i}$	$\frac{1}{3} - \frac{\sqrt{3}}{3}i$
46	$6\sqrt{2}(\cos 45^\circ + i\sin 45^\circ)$	$6 + 6i$
47	$\frac{9}{4}e^{\frac{7\pi}{6}i}$	$-\frac{9\sqrt{3}}{8} - \frac{9}{8}i$
48	$5(\cos \pi + i\sin \pi)$	-5
49	$\frac{1}{2}e^{\frac{\pi}{2}i}$	$-\frac{1}{2}i$
50	$6e^{\frac{\pi}{6}i}$	$3(\sqrt{3} + i)$
51	$\frac{1}{\sqrt{12}}\left(\cos\frac{11\pi}{6} + i\sin\frac{11\pi}{6}\right)$	$\frac{1}{4} - \frac{\sqrt{3}}{12}i$
52	$-i\sin 480^\circ$	$-\frac{\sqrt{3}}{2}i$
53	$\sqrt{3}e^{\frac{11\pi}{6}i}$	$\frac{3}{2} - \frac{\sqrt{3}}{2}i$

trasforma le seguenti espressioni nella forma algebrica, esponenziale e trigonometrica

54	$e^{\frac{\pi}{3}i} + e^{\frac{\pi}{2}i} - i$	$\frac{3}{2} + \frac{\sqrt{3}}{2}i$	$\sqrt{3}e^{\frac{\pi}{6}i}$	$\sqrt{3}\left(\cos\frac{\pi}{6} + i\sin\frac{\pi}{6}\right)$
55	$e^{\frac{5\pi}{4}i} + e^{\frac{7\pi}{4}i}$	$-\sqrt{2}i$	$\sqrt{2}e^{\frac{3\pi}{2}i}$	$\sqrt{2}\left(\cos\frac{3\pi}{2} + i\sin\frac{3\pi}{2}\right)$

56	$\frac{2e^{\frac{2\pi}{3}i}}{3e^{\pi i}}$	$\frac{1}{3} - \frac{\sqrt{3}}{3}i$	$\frac{2}{3}e^{\frac{5\pi}{3}i}$	$\frac{2}{3}\left(\cos\frac{5\pi}{3} + i\sin\frac{5\pi}{3}\right)$
57	$1 - i^2 + (2i - 3)(2i + 3)$	-11	$11e^{\pi i}$	$11(\cos\pi + i\sin\pi)$
58	$(1 + i)^2$	$2i$	$2e^{\frac{\pi}{2}i}$	$2\left(\cos\frac{\pi}{2} + i\sin\frac{\pi}{2}\right)$
59	$(1 - i)^3$	$-2 - 2i$	$2\sqrt{2}e^{\frac{5\pi}{4}i}$	$2\sqrt{2}\left(\cos\frac{5\pi}{4} + i\sin\frac{5\pi}{4}\right)$
60	$\frac{1 - i}{1 + i}$	$-i$	$e^{\frac{3\pi}{2}i}$	$\left(\cos\frac{3\pi}{2} + i\sin\frac{3\pi}{2}\right)$
61	$(2 + 5i)(1 - i) - 7 + \sqrt{3}$	$\sqrt{3} + 3i$	$2\sqrt{3}e^{\frac{\pi}{3}i}$	$2\sqrt{3}\left(\cos\frac{\pi}{3} + i\sin\frac{\pi}{3}\right)$
62	$\frac{1}{3i}$	$-\frac{1}{3}i$	$\frac{1}{3}e^{\frac{3\pi}{2}i}$	$\frac{1}{3}\left(\cos\frac{3\pi}{2} + i\sin\frac{3\pi}{2}\right)$
63	i^5	i	$e^{\frac{\pi}{2}i}$	$\left(\cos\frac{\pi}{2} + i\sin\frac{\pi}{2}\right)$
64	$\frac{\sqrt{3} - i}{2} + \frac{1}{i}$	$\frac{\sqrt{3}}{2} - \frac{3}{2}i$	$\sqrt{3}e^{\frac{5\pi}{3}i}$	$\sqrt{3}\left(\cos\frac{5\pi}{3} + i\sin\frac{5\pi}{3}\right)$
65	$\frac{2\sqrt{2}e^{\frac{3\pi}{4}i}}{2 + 2i}$	i	$e^{\frac{\pi}{2}i}$	$\left(\cos\frac{\pi}{2} + i\sin\frac{\pi}{2}\right)$
66	$\frac{i^{36} + i^{45}}{i^{23}}$	$1 + i$	$\sqrt{2}e^{\frac{\pi}{4}i}$	$\sqrt{2}\left(\cos\frac{\pi}{4} + i\sin\frac{\pi}{4}\right)$
67	$\frac{3 - 2i}{i - 3} + \frac{1 - 9i}{i^2 - 9}$	$-\frac{6}{5} + \frac{6}{5}i$	$\frac{6\sqrt{2}}{5}e^{\frac{3\pi}{4}i}$	$\frac{6\sqrt{2}}{5}\left(\cos\frac{3\pi}{4} + i\sin\frac{3\pi}{4}\right)$

dopo aver trasformato i seguenti numeri complessi in forma algebrica calcolane la potenza

68	$[\sqrt{2}(\cos 10^\circ + i\sin 10^\circ)]^3$	$\sqrt{2}(\sqrt{3} + i)$
69	$[2\sqrt{3}(\cos 15^\circ + i\sin 15^\circ)]^3$	$12\sqrt{6}(1 + i)$
70	$[4(\cos(-12^\circ) + i\sin(-12^\circ))]^5$	$512(1 - i\sqrt{3})$
71	$\left[\frac{1}{3}\left(\cos\frac{\pi}{30} + i\sin\frac{\pi}{30}\right)\right]^5$	$\frac{\sqrt{3} + i}{486}$
72	$\left(\cos\left(-\frac{\pi}{20}\right) + i\sin\left(-\frac{\pi}{20}\right)\right)^{10}$	$-i$