Insiemi numerici

determina quali dei numeri seguenti appartengono a $\mathbb{Q} \cap \mathbb{Z}$		
1	$\{-1\ ,\ 5,\ \frac{3}{4},\ -\frac{7}{8},\ \frac{\pi}{12}, -10,\ 22\}$	$\{-1, 5, -10, 22\}$
2	$\{\sqrt{2}\ , -\frac{\sqrt[3]{9}}{5}, -4,\ \frac{18}{\sqrt[3]{27}},\ \pi,\ 9,\ \pi^2\}$	$\{-4, \frac{18}{\sqrt[3]{27}}, 9\}$
3	$\{15, (\sqrt{3}+1)^2, -\frac{98}{7}, (\sqrt{3})^2, -\frac{92}{7}, 4\ , 0\}$	$\{15, -\frac{98}{7}, (\sqrt{3})^2, 4, 0\}$
4	$\{(\sqrt{3}-\sqrt{12})^2, \frac{\pi^2-\pi}{4}, -19, \sqrt[3]{6}\ , (-10)^3, \frac{21}{28}, 1\}$	$\{(\sqrt{3}-\sqrt{12})^2, -19, (-10)^3, 1\}$
5	$\left\{\left(\frac{\pi}{2}+1\right)\left(\frac{\pi}{2}-1\right)-\frac{\pi^2}{4}\ , 8, -2^5, -\sqrt[5]{2}\ , \frac{1}{2}, \frac{2^3}{3^2}\right\}$	$\left\{\left(\frac{\pi}{2}+1\right)\left(\frac{\pi}{2}-1\right)-\frac{\pi^2}{4}\ , 8, -2^5\right\}$

determina quali dei numeri seguenti appartengono a $\mathbb{Q} \cap \mathbb{R}^+$		
6	$\left\{0, -\frac{2}{3}\ , \sqrt[6]{64}\ , \sqrt[5]{-32}, -\sqrt{10},\ 3^\pi, \frac{3}{2}\right\}$	$\left\{0, \sqrt[6]{64}\ , \frac{3}{2}\right\}$
7	$\left\{\frac{\sqrt{9}}{\sqrt{16}}, -\frac{\sqrt{16}}{\sqrt{9}}, -2, -\frac{1}{2}, \frac{5}{8}, \sqrt{1+\sqrt{9}}, \sqrt{1+\sqrt{15}}\ \right\}$	$\left\{\frac{\sqrt{9}}{\sqrt{16}}, \frac{5}{8}, \sqrt{1+\sqrt{9}}\ \right\}$
8	$\left\{\frac{9}{7},\ \frac{7}{9},\ -\frac{9}{7},\ \sqrt{5},\ \sqrt{\frac{1}{5}},\ -\sqrt{5},\ 6\right\}$	$\left\{\frac{9}{7},\ \frac{7}{9},\ 6\right\}$
9	$\{8, -16, -\frac{22}{4}, \frac{5}{12}\ , \sqrt{8}\ , -\frac{1}{\sqrt{49}}\ , \sqrt[3]{8}\ \}$	$\{8\ , \frac{5}{12}\ , \sqrt[3]{8}\}$
10	$\{\sqrt[3]{9}\ , \sqrt[3]{-9}\ , 5, \frac{17}{2^3}, \frac{1}{\sqrt{49}}, \left(\frac{5}{13}-1\right)^2\ , -9\}$	$\{5, \frac{17}{2^3}, \frac{1}{\sqrt{49}}, \left(\frac{5}{13}-1\right)^2\}$

determina quali dei numeri seguenti appartengono a $(\mathbb{Q} - \mathbb{Z}) \cup \mathbb{N}$		
11	$\{2\ , \frac{7}{23}, -\frac{7}{22}, -\frac{21}{7}, \sqrt[3]{-2}\ , -\sqrt[3]{-8}\ , \sqrt{-4}\ \}$	$\{2\ , \frac{7}{23}, -\frac{7}{22}\ , -\sqrt[3]{-8}\ \}$
12	$\{-\frac{11}{2}, \frac{5}{6}, \frac{\sqrt{5}}{6}, -6, 12, \frac{\pi}{4}, -\frac{1}{\sqrt{1/4}}\ \}$	$\{-\frac{11}{2}, \frac{5}{6}, 12\}$
13	$\{\sqrt{\sqrt[3]{64}}, \sqrt{\sqrt[3]{-64}}, \sqrt[3]{\sqrt{-1}}, 4, 4.56, \frac{9}{11}, -\frac{20}{5}\}$	$\{\sqrt{\sqrt[3]{64}}, 4, 4.56, \frac{9}{11}\}$
14	$\{-16, \pi, 3.14, \frac{2}{9}, \frac{9}{2}, -4.01, \sqrt{6.25}\ \}$	$\{3.14, \frac{2}{9}, \frac{9}{2}, -4.01, \sqrt{6.25}\ \}$
15	$\{-0.\bar{9}, \sqrt[3]{-9}, \sqrt[3]{-27}, 0, -\frac{1}{(-2)^3}\ , -\frac{8}{(-2)^2}, 3.\bar{6}\}$	$\{0, -\frac{1}{(-2)^3}\ , 3.\bar{6}\}$

Insiemi numerici

determina quali dei numeri seguenti appartengono a $\mathbb{R} - \mathbb{Q}$		
16	$\{\sqrt{5}, \frac{\sqrt{5}+1}{2}, \frac{2}{\pi}, 19, -7, 3^0, 3^{-1}\}$	$\{\sqrt{5}, \frac{\sqrt{5}+1}{2}, \frac{2}{\pi}\}$
17	$\{2^\pi, \pi^2, 2^2, \pi^\pi, -\pi^0, \frac{2}{3}, 3.14\}$	$\{2^\pi, \pi^2, \pi^\pi\}$
18	$\{3.14 - \pi, \pi - 3.14, \sqrt{18}, \sqrt{81}, \sqrt{-16}, -\sqrt{16}, 7\}$	$\{3.14 - \pi, \pi - 3.14, \sqrt{18}\}$
19	$\{\frac{56}{7}, -\frac{7}{56}, \sqrt{56}, \sqrt[3]{3}, -\sqrt{\left(\frac{6}{5} - 1\right)}, -4, \sqrt{\left(1 - \frac{6}{5}\right)}\}$	$\{\sqrt{56}, \sqrt[3]{3}, -\sqrt{\left(\frac{6}{5} - 1\right)}\}$
20	$\{1.\bar{3} - 0.\bar{6}, 2\pi, -\frac{\pi}{4}, \frac{1}{4}, \pi\sqrt{25}, \frac{2}{3\sqrt{3}}, \frac{\sqrt{3}}{\sqrt{12}}\}$	$\{2\pi, -\frac{\pi}{4}, \pi\sqrt{25}, \frac{2}{3\sqrt{3}}\}$

determina quali dei numeri seguenti appartengono a $\mathbb{R} - \mathbb{A}$ con $\mathbb{A}$ insieme dei numeri algebrici		
21	$\{2^{\sqrt{2}}, \sqrt{2}^2, \pi^0, \pi^1, 1 - \sqrt{3}, 1 + \sqrt{3}, -4\}$	$\{2^{\sqrt{2}}, \pi^1\}$
22	$\{\sqrt[3]{5}, \sqrt[3]{-1}, \sqrt{-1}, -\frac{9}{17}, 0.0\bar{2}, \sqrt{3}^5, 5^{\sqrt{3}}\}$	$\{5^{\sqrt{3}}\}$
23	$\left\{\frac{1}{\sqrt{5}}, \frac{3.14}{\pi}, -\frac{\pi}{3.14}, 8, -5, 1.\overline{12}, \frac{\sqrt[3]{3}}{\sqrt{5}}\right\}$	$\left\{\frac{3.14}{\pi}, -\frac{\pi}{3.14}\right\}$
24	$\{1, \left(\frac{3}{4}\right)^{\sqrt{25}}, \left(\frac{3}{4}\right)^{\sqrt{23}}, \sqrt[21]{4}, 4^{\sqrt{19}}, \frac{6}{7}, (-0.1)^3\}$	$\{\left(\frac{3}{4}\right)^{\sqrt{23}}, 4^{\sqrt{19}}\}$
25	$\{\sqrt[5]{\sqrt[3]{-1}}, \sqrt[\sqrt{2}]{2}, \sqrt[\sqrt{4}]{4}, \sqrt[4]{\sqrt[3]{-1}}, \left(\frac{2}{3}\right)^{1.\overline{7}}, 1.\bar{3}^{\sqrt{3}}, 69\}$	$\{\sqrt[\sqrt{2}]{2}, 1.\bar{3}^{\sqrt{3}}\}$

determina quali dei numeri seguenti appartengono a $\mathbb{R}^- - \mathbb{Z}$		
26	$\{\pi^{-1}, 1 - \sqrt{2}, 0, \sqrt{2} - 1, \sqrt{-4}, -\sqrt{4}, -\frac{4}{5}\}$	$\{1 - \sqrt{2}, -\frac{4}{5}\}$
27	$\left\{2^{\sqrt{2}}, 2^{-\sqrt{2}}, -4.5, -9.\bar{9}, \sqrt[3]{-8}, \sqrt[3]{-7}, -1\right\}$	$\{-4.5, \sqrt[3]{-7}\}$
28	$\{(-1)^{-1}, \frac{\sqrt{2}-\sqrt{3}}{\sqrt{5}-\sqrt{7}}, \frac{\sqrt{3}-\sqrt{2}}{\sqrt{7}-\sqrt{5}}, \frac{\sqrt{7}-\sqrt{2}}{\sqrt{3}-\sqrt{5}}, (-2)^{-3}, 3 - \pi, \pi - 3.\bar{1}\}$	$\{\frac{\sqrt{7}-\sqrt{2}}{\sqrt{3}-\sqrt{5}}, (-2)^{-3}, 3 - \pi\}$
29	$\left\{\left(\sqrt[3]{2} - \sqrt{2}\right)^3, -7.\bar{7}, -7.\bar{9}, -\frac{5}{4}, -\sqrt{\pi}, 2, -\frac{26}{13}\right\}$	$\left\{\left(\sqrt[3]{2} - \sqrt{2}\right)^3, -7.\bar{7}, -\frac{5}{4}, -\sqrt{\pi}\right\}$
30	$\{\sqrt{-\sqrt[3]{-3}}, \frac{8}{3\sqrt[3]{-5}}, -6, (-7)^2, (-7)^3, (-7)^{-2}, (-7)^{-3}\}$	$\{\frac{8}{3\sqrt[3]{-5}}, (-7)^{-3}\}$