

نام و نام خانوادگی نوشته شود است نه سلفه صفرها را می برد

آینا ریشی ۱/۵

۱- $\epsilon_n = 3n^2 - 1 = 2, 5, 8, 13, 18, 25, 32, 41, 50, 61, 72, 85, 98, 113, 130, 149, 170, 193, 218, 245, 274, 305, 338, 373, 410, 449, 490, 533, 578, 625, 674, 725, 778, 833, 890, 949, 1010, 1073, 1138, 1205, 1274, 1345, 1418, 1493, 1570, 1649, 1730, 1813, 1898, 1985, 2074, 2165, 2258, 2353, 2450, 2549, 2650, 2753, 2858, 2965, 3074, 3185, 3298, 3413, 3530, 3649, 3770, 3893, 4018, 4145, 4274, 4405, 4538, 4673, 4810, 4949, 5090, 5233, 5378, 5525, 5674, 5825, 5978, 6133, 6290, 6449, 6610, 6773, 6938, 7105, 7274, 7445, 7618, 7793, 7970, 8149, 8330, 8513, 8698, 8885, 9074, 9265, 9458, 9653, 9850, 10050, 10253, 10458, 10665, 10874, 11085, 11298, 11513, 11730, 11949, 12170, 12393, 12618, 12845, 13074, 13305, 13538, 13773, 14010, 14249, 14490, 14733, 14978, 15225, 15474, 15725, 15978, 16233, 16490, 16749, 17010, 17273, 17538, 17805, 18074, 18345, 18618, 18893, 19170, 19450, 19733, 20018, 20305, 20594, 20885, 21178, 21473, 21770, 22069, 22370, 22673, 22978, 23285, 23594, 23905, 24218, 24533, 24850, 25169, 25490, 25813, 26138, 26465, 26794, 27125, 27458, 27793, 28130, 28469, 28810, 29153, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340, 345, 350, 355, 360, 365, 370, 375, 380, 385, 390, 395, 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660, 665, 670, 675, 680, 685, 690, 695, 700, 705, 710, 715, 720, 725, 730, 735, 740, 745, 750, 755, 760, 765, 770, 775, 780, 785, 790, 795, 800, 805, 810, 815, 820, 825, 830, 835, 840, 845, 850, 855, 860, 865, 870, 875, 880, 885, 890, 895, 900, 905, 910, 915, 920, 925, 930, 935, 940, 945, 950, 955, 960, 965, 970, 975, 980, 985, 990, 995, 1000$

۲- $\epsilon_n = \frac{2n+1}{n+1} = \frac{3}{2}, \frac{5}{3}, \frac{7}{4}, \frac{9}{5}, \frac{11}{6}, \frac{13}{7}, \frac{15}{8}, \frac{17}{9}, \frac{19}{10}, \frac{21}{11}, \frac{23}{12}, \frac{25}{13}, \frac{27}{14}, \frac{29}{15}, \frac{31}{16}, \frac{33}{17}, \frac{35}{18}, \frac{37}{19}, \frac{39}{20}, \frac{41}{21}, \frac{43}{22}, \frac{45}{23}, \frac{47}{24}, \frac{49}{25}, \frac{51}{26}, \frac{53}{27}, \frac{55}{28}, \frac{57}{29}, \frac{59}{30}, \frac{61}{31}, \frac{63}{32}, \frac{65}{33}, \frac{67}{34}, \frac{69}{35}, \frac{71}{36}, \frac{73}{37}, \frac{75}{38}, \frac{77}{39}, \frac{79}{40}, \frac{81}{41}, \frac{83}{42}, \frac{85}{43}, \frac{87}{44}, \frac{89}{45}, \frac{91}{46}, \frac{93}{47}, \frac{95}{48}, \frac{97}{49}, \frac{99}{50}, \frac{101}{51}, \frac{103}{52}, \frac{105}{53}, \frac{107}{54}, \frac{109}{55}, \frac{111}{56}, \frac{113}{57}, \frac{115}{58}, \frac{117}{59}, \frac{119}{60}, \frac{121}{61}, \frac{123}{62}, \frac{125}{63}, \frac{127}{64}, \frac{129}{65}, \frac{131}{66}, \frac{133}{67}, \frac{135}{68}, \frac{137}{69}, \frac{139}{70}, \frac{141}{71}, \frac{143}{72}, \frac{145}{73}, \frac{147}{74}, \frac{149}{75}, \frac{151}{76}, \frac{153}{77}, \frac{155}{78}, \frac{157}{79}, \frac{159}{80}, \frac{161}{81}, \frac{163}{82}, \frac{165}{83}, \frac{167}{84}, \frac{169}{85}, \frac{171}{86}, \frac{173}{87}, \frac{175}{88}, \frac{177}{89}, \frac{179}{90}, \frac{181}{91}, \frac{183}{92}, \frac{185}{93}, \frac{187}{94}, \frac{189}{95}, \frac{191}{96}, \frac{193}{97}, \frac{195}{98}, \frac{197}{99}, \frac{199}{100}$

۳- $\epsilon_n = \frac{(-1)^n}{\sqrt{n+1}} = \frac{1}{\sqrt{2}}, \frac{-1}{\sqrt{3}}, \frac{1}{\sqrt{4}}, \frac{-1}{\sqrt{5}}, \frac{1}{\sqrt{6}}, \frac{-1}{\sqrt{7}}, \frac{1}{\sqrt{8}}, \frac{-1}{\sqrt{9}}, \frac{1}{\sqrt{10}}, \frac{-1}{\sqrt{11}}, \frac{1}{\sqrt{12}}, \frac{-1}{\sqrt{13}}, \frac{1}{\sqrt{14}}, \frac{-1}{\sqrt{15}}, \frac{1}{\sqrt{16}}, \frac{-1}{\sqrt{17}}, \frac{1}{\sqrt{18}}, \frac{-1}{\sqrt{19}}, \frac{1}{\sqrt{20}}, \frac{-1}{\sqrt{21}}, \frac{1}{\sqrt{22}}, \frac{-1}{\sqrt{23}}, \frac{1}{\sqrt{24}}, \frac{-1}{\sqrt{25}}, \frac{1}{\sqrt{26}}, \frac{-1}{\sqrt{27}}, \frac{1}{\sqrt{28}}, \frac{-1}{\sqrt{29}}, \frac{1}{\sqrt{30}}, \frac{-1}{\sqrt{31}}, \frac{1}{\sqrt{32}}, \frac{-1}{\sqrt{33}}, \frac{1}{\sqrt{34}}, \frac{-1}{\sqrt{35}}, \frac{1}{\sqrt{36}}, \frac{-1}{\sqrt{37}}, \frac{1}{\sqrt{38}}, \frac{-1}{\sqrt{39}}, \frac{1}{\sqrt{40}}, \frac{-1}{\sqrt{41}}, \frac{1}{\sqrt{42}}, \frac{-1}{\sqrt{43}}, \frac{1}{\sqrt{44}}, \frac{-1}{\sqrt{45}}, \frac{1}{\sqrt{46}}, \frac{-1}{\sqrt{47}}, \frac{1}{\sqrt{48}}, \frac{-1}{\sqrt{49}}, \frac{1}{\sqrt{50}}, \frac{-1}{\sqrt{51}}, \frac{1}{\sqrt{52}}, \frac{-1}{\sqrt{53}}, \frac{1}{\sqrt{54}}, \frac{-1}{\sqrt{55}}, \frac{1}{\sqrt{56}}, \frac{-1}{\sqrt{57}}, \frac{1}{\sqrt{58}}, \frac{-1}{\sqrt{59}}, \frac{1}{\sqrt{60}}, \frac{-1}{\sqrt{61}}, \frac{1}{\sqrt{62}}, \frac{-1}{\sqrt{63}}, \frac{1}{\sqrt{64}}, \frac{-1}{\sqrt{65}}, \frac{1}{\sqrt{66}}, \frac{-1}{\sqrt{67}}, \frac{1}{\sqrt{68}}, \frac{-1}{\sqrt{69}}, \frac{1}{\sqrt{70}}, \frac{-1}{\sqrt{71}}, \frac{1}{\sqrt{72}}, \frac{-1}{\sqrt{73}}, \frac{1}{\sqrt{74}}, \frac{-1}{\sqrt{75}}, \frac{1}{\sqrt{76}}, \frac{-1}{\sqrt{77}}, \frac{1}{\sqrt{78}}, \frac{-1}{\sqrt{79}}, \frac{1}{\sqrt{80}}, \frac{-1}{\sqrt{81}}, \frac{1}{\sqrt{82}}, \frac{-1}{\sqrt{83}}, \frac{1}{\sqrt{84}}, \frac{-1}{\sqrt{85}}, \frac{1}{\sqrt{86}}, \frac{-1}{\sqrt{87}}, \frac{1}{\sqrt{88}}, \frac{-1}{\sqrt{89}}, \frac{1}{\sqrt{90}}, \frac{-1}{\sqrt{91}}, \frac{1}{\sqrt{92}}, \frac{-1}{\sqrt{93}}, \frac{1}{\sqrt{94}}, \frac{-1}{\sqrt{95}}, \frac{1}{\sqrt{96}}, \frac{-1}{\sqrt{97}}, \frac{1}{\sqrt{98}}, \frac{-1}{\sqrt{99}}, \frac{1}{\sqrt{100}}$

۴- $\epsilon_n = 2n - \lfloor \frac{n}{2} \rfloor = 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100$

۵- $\epsilon_n = 2n - 10 = 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149, 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181, 183, 185, 187, 189, 191, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213, 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239, 241, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291, 293, 295, 297, 299, 301, 303, 305, 307, 309, 311, 313, 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337, 339, 341, 343, 345, 347, 349, 351, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 383, 385, 387, 389, 391, 393, 395, 397, 399, 401, 403, 405, 407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437, 439, 441, 443, 445, 447, 449, 451, 453, 455, 457, 459, 461, 463, 465, 467, 469, 471, 473, 475, 477, 479, 481, 483, 485, 487, 489, 491, 493, 495, 497, 499, 501, 503, 505, 507, 509, 511, 513, 515, 517, 519, 521, 523, 525, 527, 529, 531, 533, 535, 537, 539, 541, 543, 545, 547, 549, 551, 553, 555, 557, 559, 561, 563, 565, 567, 569, 571, 573, 575, 577, 579, 581, 583, 585, 587, 589, 591, 593, 595, 597, 599, 601, 603, 605, 607, 609, 611, 613, 615, 617, 619, 621, 623, 625, 627, 629, 631, 633, 635, 637, 639, 641, 643, 645, 647, 649, 651, 653, 655, 657, 659, 661, 663, 665, 667, 669, 671, 673, 675, 677, 679, 681, 683, 685, 687, 689, 691, 693, 695, 697, 699, 701, 703, 705, 707, 709, 711, 713, 715, 717, 719, 721, 723, 725, 727, 729, 731, 733, 735, 737, 739, 741, 743, 745, 747, 749, 751, 753, 755, 757, 759, 761, 763, 765, 767, 769, 771, 773, 775, 777, 779, 781, 783, 785, 787, 789, 791, 793, 795, 797, 799, 801, 803, 805, 807, 809, 811, 813, 815, 817, 819, 821, 823, 825, 827, 829, 831, 833, 835, 837, 839, 841, 843, 845, 847, 849, 851, 853, 855, 857, 859, 861, 863, 865, 867, 869, 871, 873, 875, 877, 879, 881, 883, 885, 887, 889, 891, 893, 895, 897, 899, 901, 903, 905, 907, 909, 911, 913, 915, 917, 919, 921, 923, 925, 927, 929, 931, 933, 935, 937, 939, 941, 943, 945, 947, 949, 951, 953, 955, 957, 959, 961, 963, 965, 967, 969, 971, 973, 975, 977, 979, 981, 983, 985, 987, 989, 991, 993, 995, 997, 999, 1001, 1003, 1005, 1007, 1009, 1011, 1013, 1015, 1017, 1019, 1021, 1023, 1025, 1027, 1029, 1031, 1033, 1035, 1037, 1039, 1041, 1043, 1045, 1047, 1049, 1051, 1053, 1055, 1057, 1059, 1061, 1063, 1065, 1067, 1069, 1071, 1073, 1075, 1077, 1079, 1081, 1083, 1085, 1087, 1089, 1091, 1093, 1095, 1097, 1099, 1101, 1103, 1105, 1107, 1109, 1111, 1113, 1115, 1117, 1119, 1121, 1123, 1125, 1127, 1129, 1131, 1133, 1135, 1137, 1139, 1141, 1143, 1145, 1147, 1149, 1151, 1153, 1155, 1157, 1159, 1161, 1163, 1165, 1167, 1169, 1171, 1173, 1175, 1177, 1179, 1181, 1183, 1185, 1187, 1189, 1191, 1193, 1195, 1197, 1199, 1201, 1203, 1205, 1207, 1209, 1211, 1213, 1215, 1217, 1219, 1221, 1223, 1225, 1227, 1229, 1231, 1233, 1235, 1237, 1239, 1241, 1243, 1245, 1247, 1249, 1251, 1253, 1255, 1257, 1259, 1261, 1263, 1265, 1267, 1269, 1271, 1273, 1275, 1277, 1279, 1281, 1283, 1285, 1287, 1289, 1291, 1293, 1295, 1297, 1299, 1301, 1303, 1305, 1307, 1309, 1311, 1313, 1315, 1317, 1319, 1321, 1323, 1325, 1327, 1329, 1331, 1333, 1335, 1337, 1339, 1341, 1343, 1345, 1347, 1349, 1351, 1353, 1355, 1357, 1359, 1361, 1363, 1365, 1367, 1369, 1371, 1373, 1375, 1377, 1379, 1381, 1383, 1385, 1387, 1389, 1391, 1393, 1395, 1397, 1399, 1401, 1403, 1405, 1407, 1409, 1411, 1413, 1415, 1417, 1419, 1421, 1423, 1425, 1427, 1429, 1431, 1433, 1435, 1437, 1439, 1441, 1443, 1445, 1447, 1449, 1451, 1453, 1455, 1457, 1459, 1461, 1463, 1465, 1467, 1469, 1471, 1473, 1475, 1477, 1479, 1481, 1483, 1485, 1487, 1489, 1491, 1493, 1495, 1497, 1499, 1501, 1503, 1505, 1507, 1509, 1511, 1513, 1515, 1517, 1519, 1521, 1523, 1525, 1527, 1529, 1531, 1533, 1535, 1537, 1539, 1541, 1543, 1545, 1547, 1549, 1551, 1553, 1555, 1557, 1559, 1561, 1563, 1565, 1567, 1569, 1571, 1573, 1575, 1577, 1579, 1581, 1583, 1585, 1587, 1589, 1591, 1593, 1595, 1597, 1599, 1601, 1603, 1605, 1607, 1609, 1611, 1613, 1615, 1617, 1619, 1621, 1623, 1625, 1627, 1629, 1631, 1633, 1635, 1637, 1639, 1641, 1643, 1645, 1647, 1649, 1651, 1653, 1655, 1657, 1659, 1661, 1663, 1665, 1667, 1669, 1671, 1673, 1675, 1677, 1679, 1681, 1683, 1685, 1687, 1689, 1691, 1693, 1695, 1697, 1699, 1701, 1703, 1705, 1707, 1709, 1711, 1713, 1715, 1717, 1719, 1721, 1723, 1725, 1727, 1729, 1731, 1733, 1735, 1737, 1739, 1741, 1743, 1745, 1747, 1749, 1751, 1753, 1755, 1757, 1759, 1761, 1763, 1765, 1767, 1769, 1771, 1773, 1775, 1777, 1779, 1781, 1783, 1785, 1787, 1789, 1791, 1793, 1795, 1797, 1799, 1801, 1803, 1805, 1807, 1809, 1811, 1813, 1815, 1817, 1819, 1821, 1823, 1825, 1827, 1829, 1831, 1833, 1835, 1837, 1839, 1841, 1843, 1845, 1847, 1849, 1851, 1853, 1855, 1857, 1859, 1861, 1863, 1865, 1867, 1869, 1871, 1873, 1875, 1877, 1879, 1881, 1883, 1885, 1887, 1889, 1891, 1893, 1895, 1897, 1899, 1901, 1903, 1905, 1907, 1909, 1911, 1913, 1915, 1917, 1919, 1921, 1923, 1925, 1927, 1929, 1931, 1933, 1935, 1937, 1939, 1941, 1943, 1945, 1947, 1949, 1951, 1953, 1955, 1957, 1959, 1961, 1963, 1965, 1967, 1969, 1971, 1973, 1975, 1977, 1979, 1981, 1983, 1985, 1987, 1989, 1991, 1993, 1995, 1997, 1999, 2001, 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017, 2019, 2021, 2023, 2025, 2027, 2029, 2031, 2033, 2035, 2037, 2039, 2041, 2043, 2045, 2047, 2049, 2051, 2053, 2055, 2057, 2059, 2061, 2063, 2065, 2067, 2069, 2071, 2073, 2075, 2077, 2079, 2081, 2083, 2085, 2087, 2089, 2091, 2093, 2095, 2097, 2099, 2101, 2103, 2105, 2107, 2109, 2111, 2113, 2115, 2117, 2119, 2121, 2123, 2125, 2127, 2129, 2131, 2133, 2135, 2137, 2139, 2141, 2143, 2145, 2147, 2149, 2151, 2153, 2155, 2157, 2159, 2161, 2163, 2165, 2167, 2169, 2171, 2173, 2175, 2177, 2179, 2181, 2183, 2185, 2187, 2189, 2191, 2193, 2195, 2197, 2199, 2201, 2203, 2205, 2207, 2209, 2211, 2213, 2215, 2217, 2219, 2221, 2223, 2225, 2227, 2229, 2231, 2233, 2235, 2237, 2239, 2241, 2243, 2245, 2247, 2249, 2251, 2253, 2255, 2257, 2259, 2261, 2263, 2265, 2267, 2269, 2271, 2273, 2275, 2277, 2279, 2281, 2283, 2285, 2287, 2289, 2291, 2293, 2295, 2297, 2299, 2301, 2303, 2305, 2307, 2309, 2311, 2313, 2315, 2317, 2319, 2321, 2323, 2325, 2327, 2329, 2331, 2333, 2335, 2337, 2339, 2341, 2343, 2345, 2347, 2349, 2351, 2353, 2355, 2357, 2359, 2361, 2363, 2365, 2367, 2369, 2371, 2373, 2375, 2377, 2379, 2381, 2383, 2385, 2387, 2389, 2391, 2393, 2395, 2397, 2399, 2401, 2403, 2405, 2407, 2409, 2411, 2413, 2415, 2417, 2419, 2421, 2423, 2425, 2427, 2429, 2431, 2433, 2435, 2437, 2439, 2441, 2443, 2445, 2447, 2449, 2451, 2453, 2455, 2457, 2459, 2461, 2463, 2465, 2467, 2469, 2471, 2473, 2475, 2477, 2479, 2481, 2483, 2485, 2487, 2489, 2491, 2493, 2495, 2497, 2499, 2501, 2503, 2505, 2507, 2509, 2511, 2513, 2515, 2517, 2519, 2521, 2523, 2525, 2527, 2529, 2531, 2533, 2535, 2537, 2539, 2541, 2543, 2545, 2547, 2549, 2551, 2553, 2555, 2557, 2559, 2561, 2563, 2565, 2567, 2569, 2571, 2573, 2575, 2577, 2579, 2581, 2583, 2585, 2587, 2589, 2591, 2593, 2595, 2597, 2599, 2601, 2603, 2605, 2607, 2609, 2611, 2613, 2615, 2617, 2619, 2621, 2623, 2625, 2627, 2629, 2631, 2633, 2635, 2637, 2639, 2641, 2643, 2645, 2647, 2649, 2651, 2653, 2655, 2657, 2659, 2661, 2663, 2665, 2667, 2669, 2671, 2673, 2675, 2677, 2679, 2681, 2683, 2685, 2687, 2689, 2691, 2693, 2695, 2697, 2699, 2701, 2703, 2705, 2707, 2709, 2711, 2713, 2715, 2717, 2719, 2721, 2723, 2725, 2727, 2729, 2731, 2733, 2735, 2737, 2739, 2741, 2743, 2745, 2747, 2749, 2751, 2753, 2755, 2757, 2759, 2761, 2763, 2765, 2767, 2769, 2771, 2773, 2775, 2777, 2779, 2781, 278$

$$-4, -7, -1, -7, -2, \dots \quad 2a+2 \rightarrow a+1$$

$$\begin{cases} a+b+c = -2 \\ 4a+2b+c = -7 \end{cases} \quad \begin{cases} b = -4 \\ c = 1 \end{cases}$$

$$a_n = n^2 - 4n + 1$$

$$a_{10} = 10^2 - 4 \cdot 10 + 1 = 41$$

$$-4, -1, 1, 2, \dots \quad 2a+2 \rightarrow a+2$$

$$\begin{cases} a+b+c = -4 \\ 5a+2b+c = -1 \end{cases} \rightarrow \begin{cases} b = -1 \\ c = 7 \end{cases}$$

$$a_n = 2n^2 - n + 7$$

$$a \geq 3 \quad \left\{ \begin{array}{l} 2a+1 = a+2 \\ a = 3 \end{array} \right. \quad \left. \begin{array}{l} \text{اشتراک یک معنی دارد} \\ \text{اشتراک صحت دارد} \end{array} \right\}$$

$$\left(\begin{array}{l} 2a+1 > a+2 \\ a > 3 \end{array} \right.$$