The first integers N with $\mathbb{Z}_N^*$ cyclic, and their smallest generators

Notation: $[N, m: g]$ **means**

$\mathbb{Z}_N^*$ **is cyclic,** $|\mathbb{Z}_N^*| = m$**, and** $\mathbb{Z}_N^* = \langle g \rangle$ **with** g **smallest possible**

Note that $|\mathbb{Z}_N^*| = N - 1$ precisely when N is prime.

$[3, 2: 2]$ $[4, 2: 3]$ $[5, 4: 2]$ $[6, 2: 5]$ $[7, 6: 3]$ $[9, 6: 2]$ $[10, 4: 3]$ $[11, 10: 2]$
$[13, 12: 2]$ $[14, 6: 3]$ $[17, 16: 3]$ $[18, 6: 5]$ $[19, 18: 2]$ $[22, 10: 7]$ $[23, 22: 5]$
$[25, 20: 2]$ $[26, 12: 7]$ $[27, 18: 2]$ $[29, 28: 2]$ $[31, 30: 3]$ $[34, 16: 3]$ $[37, 36: 2]$
$[38, 18: 3]$ $[41, 40: 6]$ $[43, 42: 3]$ $[46, 22: 5]$ $[47, 46: 5]$ $[49, 42: 3]$ $[50, 20: 3]$
$[53, 52: 2]$ $[54, 18: 5]$ $[58, 28: 3]$ $[59, 58: 2]$ $[61, 60: 2]$ $[62, 30: 3]$ $[67, 66: 2]$
$[71, 70: 7]$ $[73, 72: 5]$ $[74, 36: 5]$ $[79, 78: 3]$ $[81, 54: 2]$ $[82, 40: 7]$ $[83, 82: 2]$
$[86, 42: 3]$ $[89, 88: 3]$ $[94, 46: 5]$ $[97, 96: 5]$ $[98, 42: 3]$ $[101, 100: 2]$
$[103, 102: 5]$ $[106, 52: 3]$ $[107, 106: 2]$ $[109, 108: 6]$ $[113, 112: 3]$ $[118, 58: 11]$
$[121, 110: 2]$ $[122, 60: 7]$ $[125, 100: 2]$ $[127, 126: 3]$ $[131, 130: 2]$ $[134, 66: 7]$
$[137, 136: 3]$ $[139, 138: 2]$ $[142, 70: 7]$ $[146, 72: 5]$ $[149, 148: 2]$ $[151, 150: 6]$
$[157, 156: 5]$ $[158, 78: 3]$ $[162, 54: 5]$ $[163, 162: 2]$ $[166, 82: 5]$ $[167, 166: 5]$
$[169, 156: 2]$ $[173, 172: 2]$ $[178, 88: 3]$ $[179, 178: 2]$ $[181, 180: 2]$ $[191, 190: 19]$
$[193, 192: 5]$ $[194, 96: 5]$ $[197, 196: 2]$ $[199, 198: 3]$ $[202, 100: 3]$ $[206, 102: 5]$
$[211, 210: 2]$ $[214, 106: 5]$ $[218, 108: 11]$ $[223, 222: 3]$ $[226, 112: 3]$ $[227, 226: 2]$
$[229, 228: 6]$ $[233, 232: 3]$ $[239, 238: 7]$ $[241, 240: 7]$ $[242, 110: 7]$ $[243, 162: 2]$
$[250, 100: 3]$ $[251, 250: 6]$ $[254, 126: 3]$ $[257, 256: 3]$ $[262, 130: 17]$ $[263, 262: 5]$
$[269, 268: 2]$ $[271, 270: 6]$ $[274, 136: 3]$ $[277, 276: 5]$ $[278, 138: 3]$ $[281, 280: 3]$
$[283, 282: 3]$ $[289, 272: 3]$ $[293, 292: 2]$ $[298, 148: 3]$ $[302, 150: 7]$ $[307, 306: 5]$
$[311, 310: 17]$ $[313, 312: 10]$ $[314, 156: 5]$ $[317, 316: 2]$ $[326, 162: 3]$
$[331, 330: 3]$ $[334, 166: 5]$ $[337, 336: 10]$ $[338, 156: 7]$ $[343, 294: 3]$ $[346, 172: 3]$
$[347, 346: 2]$ $[349, 348: 2]$ $[353, 352: 3]$ $[358, 178: 7]$ $[359, 358: 7]$
$[361, 342: 2]$ $[362, 180: 21]$ $[367, 366: 6]$ $[373, 372: 2]$ $[379, 378: 2]$
$[382, 190: 19]$ $[383, 382: 5]$ $[386, 192: 5]$ $[389, 388: 2]$ $[394, 196: 3]$ $[397, 396: 5]$
$[398, 198: 3]$ $[401, 400: 3]$ $[409, 408: 21]$ $[419, 418: 2]$ $[421, 420: 2]$ $[422, 210: 3]$
$[431, 430: 7]$ $[433, 432: 5]$ $[439, 438: 15]$ $[443, 442: 2]$ $[446, 222: 3]$ $[449, 448: 3]$
$[454, 226: 5]$ $[457, 456: 13]$ $[458, 228: 7]$ $[461, 460: 2]$ $[463, 462: 3]$ $[466, 232: 3]$
$[467, 466: 2]$ $[478, 238: 7]$ $[479, 478: 13]$ $[482, 240: 7]$ $[486, 162: 5]$ $[487, 486: 3]$
$[491, 490: 2]$ $[499, 498: 7]$ $[502, 250: 11]$ $[503, 502: 5]$ $[509, 508: 2]$ $[514, 256: 3]$
$[521, 520: 3]$ $[523, 522: 2]$ $[526, 262: 5]$ $[529, 506: 5]$ $[538, 268: 3]$ $[541, 540: 2]$
$[542, 270: 15]$ $[547, 546: 2]$ $[554, 276: 5]$ $[557, 556: 2]$ $[562, 280: 3]$ $[563, 562: 2]$
$[566, 282: 3]$ $[569, 568: 3]$ $[571, 570: 3]$ $[577, 576: 5]$ $[578, 272: 3]$ $[586, 292: 3]$
$[587, 586: 2]$ $[593, 592: 3]$ $[599, 598: 7]$ $[601, 600: 7]$ $[607, 606: 3]$ $[613, 612: 2]$
$[614, 306: 5]$ $[617, 616: 3]$ $[619, 618: 2]$ $[622, 310: 17]$ $[625, 500: 2]$
$[626, 312: 15]$ $[631, 630: 3]$ $[634, 316: 3]$ $[641, 640: 3]$ $[643, 642: 11]$
$[647, 646: 5]$ $[653, 652: 2]$ $[659, 658: 2]$ $[661, 660: 2]$ $[662, 330: 3]$ $[673, 672: 5]$
$[674, 336: 15]$ $[677, 676: 2]$ $[683, 682: 5]$ $[686, 294: 3]$ $[691, 690: 3]$ $[694, 346: 5]$
$[698, 348: 7]$ $[701, 700: 2]$ $[706, 352: 3]$ $[709, 708: 2]$ $[718, 358: 7]$
$[719, 718: 11]$ $[722, 342: 3]$ $[727, 726: 5]$ $[729, 486: 2]$ $[733, 732: 6]$
$[734, 366: 11]$ $[739, 738: 3]$ $[743, 742: 5]$ $[746, 372: 5]$ $[751, 750: 3]$ $[757, 756: 2]$
$[758, 378: 3]$ $[761, 760: 6]$ $[766, 382: 5]$ $[769, 768: 11]$ $[773, 772: 2]$ $[778, 388: 3]$

[787, 786 : 2] [794, 396 : 5] [797, 796 : 2] [802, 400 : 3] [809, 808 : 3] [811, 810 : 3]
[818, 408 : 21] [821, 820 : 2] [823, 822 : 3] [827, 826 : 2] [829, 828 : 2]
[838, 418 : 11] [839, 838 : 11] [841, 812 : 2] [842, 420 : 23] [853, 852 : 2]
[857, 856 : 3] [859, 858 : 2] [862, 430 : 7] [863, 862 : 5] [866, 432 : 5] [877, 876 : 2]
[878, 438 : 15] [881, 880 : 3] [883, 882 : 2] [886, 442 : 5] [887, 886 : 5]
[898, 448 : 3] [907, 906 : 2] [911, 910 : 17] [914, 456 : 13] [919, 918 : 7]
[922, 460 : 3] [926, 462 : 3] [929, 928 : 3] [934, 466 : 5] [937, 936 : 5] [941, 940 : 2]
[947, 946 : 2] [953, 952 : 3] [958, 478 : 13] [961, 930 : 3] [967, 966 : 5] [971, 970 : 6]
[974, 486 : 3] [977, 976 : 3] [982, 490 : 7] [983, 982 : 5] [991, 990 : 6] [997, 996 : 7]
[998, 498 : 7] [1006, 502 : 5] [1009, 1008 : 11] [1013, 1012 : 3] [1018, 508 : 3]
[1019, 1018 : 2] [1021, 1020 : 10] [1031, 1030 : 14] [1033, 1032 : 5] [1039, 1038 : 3]
[1042, 520 : 3] [1046, 522 : 5] [1049, 1048 : 3] [1051, 1050 : 7] [1058, 506 : 5]
[1061, 1060 : 2] [1063, 1062 : 3] [1069, 1068 : 6] [1082, 540 : 13] [1087, 1086 : 3]
[1091, 1090 : 2] [1093, 1092 : 5] [1094, 546 : 5] [1097, 1096 : 3] [1103, 1102 : 5]
[1109, 1108 : 2] [1114, 556 : 3] [1117, 1116 : 2] [1123, 1122 : 2] [1126, 562 : 5]
[1129, 1128 : 11] [1138, 568 : 3] [1142, 570 : 3] [1151, 1150 : 17] [1153, 1152 : 5]
[1154, 576 : 5] [1163, 1162 : 5] [1171, 1170 : 2] [1174, 586 : 5] [1181, 1180 : 7]
[1186, 592 : 3] [1187, 1186 : 2] [1193, 1192 : 3] [1198, 598 : 7] [1201, 1200 : 11]
[1202, 600 : 7] [1213, 1212 : 2] [1214, 606 : 3] [1217, 1216 : 3] [1223, 1222 : 5]
[1226, 612 : 5] [1229, 1228 : 2] [1231, 1230 : 3] [1234, 616 : 3] [1237, 1236 : 2]
[1238, 618 : 11] [1249, 1248 : 7] [1250, 500 : 3] [1259, 1258 : 2] [1262, 630 : 3]
[1277, 1276 : 2] [1279, 1278 : 3] [1282, 640 : 3] [1283, 1282 : 2] [1286, 642 : 11]
[1289, 1288 : 6] [1291, 1290 : 2] [1294, 646 : 5] [1297, 1296 : 10] [1301, 1300 : 2]
[1303, 1302 : 6] [1306, 652 : 3] [1307, 1306 : 2] [1318, 658 : 7] [1319, 1318 : 13]
[1321, 1320 : 13] [1322, 660 : 23] [1327, 1326 : 3] [1331, 1210 : 2] [1346, 672 : 5]
[1354, 676 : 3] [1361, 1360 : 3] [1366, 682 : 5] [1367, 1366 : 5] [1369, 1332 : 2]
[1373, 1372 : 2] [1381, 1380 : 2] [1382, 690 : 3] [1399, 1398 : 13] [1402, 700 : 3]
[1409, 1408 : 3] [1418, 708 : 17] [1423, 1422 : 3] [1427, 1426 : 2] [1429, 1428 : 6]
[1433, 1432 : 3] [1438, 718 : 11] [1439, 1438 : 7] [1447, 1446 : 3] [1451, 1450 : 2]
[1453, 1452 : 2] [1454, 726 : 5] [1458, 486 : 5] [1459, 1458 : 3] [1466, 732 : 7]
[1471, 1470 : 6] [1478, 738 : 3] [1481, 1480 : 3] [1483, 1482 : 2] [1486, 742 : 5]
[1487, 1486 : 5] [1489, 1488 : 14] [1493, 1492 : 2] [1499, 1498 : 2] [1502, 750 : 3]
[1511, 1510 : 11] [1514, 756 : 5] [1522, 760 : 7] [1523, 1522 : 2] [1531, 1530 : 2]
[1538, 768 : 11] [1543, 1542 : 5] [1546, 772 : 3] [1549, 1548 : 2] [1553, 1552 : 3]
[1559, 1558 : 19] [1567, 1566 : 3] [1571, 1570 : 2] [1574, 786 : 5] [1579, 1578 : 3]
[1583, 1582 : 5] [1594, 796 : 3] [1597, 1596 : 11] [1601, 1600 : 3] [1607, 1606 : 5]
[1609, 1608 : 7] [1613, 1612 : 3] [1618, 808 : 3] [1619, 1618 : 2] [1621, 1620 : 2]
[1622, 810 : 3] [1627, 1626 : 3] [1637, 1636 : 2] [1642, 820 : 3] [1646, 822 : 3]
[1654, 826 : 7] [1657, 1656 : 11] [1658, 828 : 19] [1663, 1662 : 3] [1667, 1666 : 2]
[1669, 1668 : 2] [1678, 838 : 11] [1681, 1640 : 6] [1682, 812 : 3] [1693, 1692 : 2]
[1697, 1696 : 3] [1699, 1698 : 3] [1706, 852 : 11] [1709, 1708 : 3] [1714, 856 : 3]
[1718, 858 : 3] [1721, 1720 : 3] [1723, 1722 : 3] [1726, 862 : 5] [1733, 1732 : 2]
[1741, 1740 : 2] [1747, 1746 : 2] [1753, 1752 : 7] [1754, 876 : 5] [1759, 1758 : 6]
[1762, 880 : 3] [1766, 882 : 11] [1774, 886 : 5] [1777, 1776 : 5] [1783, 1782 : 10]
[1787, 1786 : 2] [1789, 1788 : 6] [1801, 1800 : 11] [1811, 1810 : 6] [1814, 906 : 3]