

Milestone LL 64-bit residues (S₀=4) for known Mersenne prime exponents p>103

Exponent p	Iteration number						
	100	1000	10,000	100,000	1,000,000	10,000,000	100,000,000
107	4aef 52b3 b67d db05						
127	616f 9e91 9708 e087						
521	6888 df6f 2c00 8371						
607	9b0e bdd6 dafa 1914						
1279	b1de 5795 3743 47a9	84c1 77d5 ea4c f45a					
2203	4b0a 5a16 eedc 7177	a00c ddb2 a3c7 080f					
2281	5079 4223 3a67 d00e	341f 5ceb 577f 003a					
3217	76c5 931d a401 1d1a	8fbf 527a b4a4 f506					
4253	895f 224e 5e85 01a8	58b1 df65 1633 2e49					
4423	38f0 8b4e 5c7a 26b8	5694 ea91 b4df bada					
9689	0xd96d53426acb0260	0x9d93b0f8d7866be0					
9941	0xc5e9ca2aaf364b6b	0x6e4473c2e44ed134					
11213	0xc347dcac81c02ef6	0x260e03f3bdec1e75	0x13a64c8e893cdec6				
19937	0xe4c12f70bd36cde9	0x23fd5c783f0ef773	0xc2c278e60f0545db				
21701	0xe4aaa69c50652e2	0x75b368ea24735905	0x0283b029e6c119e5				
23209	0xdd46489bb2324213	0xe8c53933ed795593	0x8f6b3c7635c0f033				
44497	0x08ab9b03b049b0de	0xd76d70f8f0325ccb	0x28919b4b9d68b55a				
86243	0xca7bffc8f8bc07c	0x1c7dffa0126ce42b	0x23992ccd735a03d9				
110503	0x36d90668ce9c4020	0xdc25d6694c4b1f09	0xacb29fc05973d0a8	0x0f4385fec05eb193			
132049	0xe48082f2b599401f	0xee8274e5f9bfd87d	0x4c52a92b54635f9e	0xbf8e44f1880d99ab			
216091	0xf568fa6a1aac6069	0xd2a2ff6c0686733e	0x30247786758b8792	0x4de7f101ee1cb7a5			
756839	0xe3459590c6b5f203	0xfadd28bdf6848f32	0x5d2cbe7cb24a109a	0x1e7a84272964fe1b			
859433	0x21a96981fd3ec4e5	0x157a2c63cb26ee19	0x3c4ad525c2d0aed0	0xf749ad0737517aa7			
1257787	0xdafae0c2f9978d9c6	0x02a5dde454358a1e	0x3f45bf9bea7213ea	0x5df3c10927093cb3	0xa97bdecd906690b0		
1398269	0xc936c6061db230c1	0xe634ed58382266b5	0xa4a6d2f0e34629db	0x34bbb2325387a40c	0x971cd02a82af6b56		
2976221	0x9e569d55b10652d9	0x71e05b463545e3d7	0x2a7111b7f70fea2f	0x89b3bdc0c72a3d9	0xa98684735dc09b2e		
3021377	0x8323c49df1973868	0x13d39f839e010b76	0x6387a70a85d46baf	0xd3b692657258a4b1	0x7c3ab7f3b5657551		
6972593	0x912e11a823267a74	0xef833400dc07adae	0x88f1d2640adb89e1	0xd96976da492dd84b	0x33859599d2a464c1		
13466917	0x4e0dce81f52792fc	0x525dcccdfabf325a	0x9fcd1f4092b15d69	0xfeede0a2c0efb6e4	0xe38ad6e1e033e25c	0x57e42018e764eb17	
20996011	0x4e146021da95925d	0xd0bb0c5b634d1a89	0x5fc58920a821da11	0x988b9ccffadb977c	0xad5038f6648951cf	0x3cb8664d26a50272	
24036583	0x9d0b56609b81b0e4	0x1045dffd14c2fb76	0xcdbdef38a0bdc4f00	0x7725dbf2829ae0ac	0x58ad93c1c8771e4a	0x88267bdb837952d	
25964951	0x57a02eb69f4557d3	0xe54fc17a6ed1da6c	0x62eb3ff0a5f6237c	0x25185840e6ec7c71	0x41165eae26c22e90	0x10a889bcc2794aec	
30402457	0x2902fd202cccb6d	0x2086c66ad02a5cc9	0x0b8600ef47e69d27	0xdb39473f7879c62b	0xe2a0a46c2b52db5c	0xa6b6487fc849dee0	
32582657	0x7967194892b104b9	0xf029eedbc2b3451f	0x02751b7fccc76bb1	0x26bae59411d73627	0xfa879f1a9a5a5c25	0xe9f05a1101a56509	
37156667	0xe3d02eb9d25b6385	0xbaf364c8ea9031ff	0x67ad7646a1fad514	0xfefee75bbd40acf22	0x78645c8c1425e98c	0x22b8fd80b56f510b	
42643801	0xc09d60f8c19c8420	0xd01cca6cccd5cf92b	0x8f90d78d5007bba7	0x3c67aa5043a8ce2d	0xb888a4e085915350	0x90364b7fef41f6b9	
43112609	0xed01e44fbf3eb69f	0xa8b1e4cd6f9ad7b9	0xe86891ebf6cd70c4	0x4a1635a4211abcd	0xa9828e347736230f	0x15857af865b4aa49	
57885161	0xa05de0c51918377f	0x0874811c47aa9071	0x76c27556683cd84d	0xe54ba81dac4ff3d8	0x39d3f4eaa2c7a7ec	0x7016721987add08d	
74207281	0x0c286cae4f69950f	0xb48b0f68f690e355	0xaa08c91f2f626775	0x513c2635d43fca6	0x619e575b2f2706c1	0x956b5ba324aeb89b	
77232917	0x3d19da7bf734ad90	0x94559a0e7e1c1bf6	0x9b79e0a1174e0175	0xf2b242e1fff3c630	0x4f90ef7d203ea3bc	0x39ba2850a45df9b5	
82589933	0xd2c82afe529941f7	0x3af698b55b1464a2	0x5a051ecc287f4883	0x01a34d994cc62a6f	0xaf567ce86d94beb1	0xa8ebd54daae96ecc	
?							

For p>7500, residues are from CUDALucas v2.06 May 2017 beta run on GTX1080; for p<7500, from Kriesel's old slow program LL11C which prime95 ~v13 was checked against. (and LL11C output for 9689 and 9941 was in turn checked against CUDALucas, matching)

Underlined exponents are not known to be the only Mersenne primes in that range, since double-checking has not completed on all prime exponents between 43112609 and 82589933, nor first-time tests for all exponents between 77232917 and 82589933. as of this file date.

Until s_i reaches the magnitude of Mn, the modulo has no effect, so the initial part of the sequence is the same for substantial exponents

i	S _i (decimal)	(hexadecimal res64)
0	4	4
1	14	0x000000000000000e
2	194	0x00000000000000c2
3	37634	0x0000000000009302
4	1416317954	0x00000000546B4C02
5	2.00595654682E+018	0x1BD696D9F03D3002 decimal values become approximate due to precision limits of the spreadsheet software;
6	4.02386166774E+036	0x8CC88407A9F4C002 res64 hex are exact (unless MS Win 7 calculator programmer mode has a bug hitting these)

see also <https://www.mersenneforum.org/showpost.php?p=15263&postcount=115> for verification res64 values for M(20996011)
<https://www.mersenneforum.org/showpost.php?p=492986&postcount=20> for final residues for selected p<10000