

Wieferich & near Wieferich Primes $p < 11e15$

$$2^{(p-1)/2} \equiv \pm 1 + Ap \pmod{p^2} \text{ and } |A|=0$$

p	±1	A
1093	+1	0
3511	+1	0

$$2^{(p-1)/2} \equiv \pm 1 + Ap \pmod{p^2} \text{ and } |A| \leq 10$$

$$p > 10$$

p	±1	A		p	±1	A
11	-1	+3		2659	-1	-1
11	-1	-8		2903	+1	+8
13	-1	+5		13463	+1	-7
13	-1	-8		15329	+1	+6
17	+1	-2		15823	+1	-2
19	-1	+8		26107	-1	-7
23	+1	-3		60631	+1	+6
31	+1	+3		546097	+1	+5
41	+1	-9		2549177	+1	+6
43	-1	+9		110057537	+1	-1
59	-1	-4		165322639	+1	-6
67	-1	-5		209227901	-1	+8
71	+1	+1		671499313	+1	-5
89	+1	+3		867457663	+1	-7
127	+1	+9		3520624567	+1	-6
251	-1	+2		46262476201	+1	+5
379	-1	-1		47004625957	-1	+1
569	+1	+9		58481216789	-1	+5
571	-1	+6		76843523891	-1	+1
911	+1	-10		1180032105761	+1	-6
1427	-1	-5		12456646902457	+1	+2
1451	-1	+7		134257821895921	+1	+10
1733	-1	-4		339258218134349	-1	+2
2633	+1	+2		2276306935816523	-1	-3

$$2^{(p-1)/2} \equiv \pm 1 + Ap \pmod{p^2} \text{ and } |A| \leq 100$$

$$p > 1e9$$

P	± 1	A	p	± 1	A	p	± 1	A
1222336487	+1	+60	82834772291	-1	+82	24990087401551	+1	+16
1259662487	+1	-71	108058158839	+1	+58	28506780213511	+1	-28
1274153897	+1	-86	130861186019	-1	-97	28785529445977	+1	+33
1494408397	-1	+52	138528575509	-1	-23	29230410915073	+1	+96
1584392531	-1	-24	239398882511	+1	-72	30189412701163	-1	-37
1586651309	-1	-24	252074060191	+1	+61	30309769394167	+1	+28
1662410923	-1	-70	252137567497	+1	-31	63735899194511	+1	-16
1817972423	+1	-56	299948374351	+1	-19	63918629031731	-1	+38
1890830857	+1	+69	405897532891	-1	+61	67961346537659	-1	-49
2062661389	-1	+55	443168739911	+1	+64	68132247624521	+1	-55
2244893621	-1	+47	504568016327	+1	+55	92226580839683	-1	-76
2332252547	-1	-33	703781283787	-1	-49	118485210646981	-1	-90
2416644757	-1	+67	955840782881	+1	-84	153332502585091	-1	+59
2461090421	-1	+47	980377925057	+1	-90	181841793213263	+1	+90
2566816313	+1	+52	981086885117	-1	+85	205250817470827	-1	-78
2570948153	+1	-41	1095406033573	-1	+42	259990715684839	+1	-12
2589186937	+1	-85	1104406423781	-1	+54	342092449620191	+1	+90
2709711233	+1	+50	1722721869859	-1	-31	346412396858131	-1	-48
2760945133	-1	-77	1730418792409	+1	-46	362061154308767	+1	-64
2954547209	+1	+32	1780536689159	+1	+84	694936752678643	-1	+75
3027263587	-1	-95	2207775149407	+1	-99	696740841781447	+1	+61
3133652447	+1	+87	2424653846701	-1	-51	734180764265903	+1	+37
3303616961	+1	-20	2610372685663	+1	-28	739507312099561	+1	-78
3606693551	+1	+21	3667691800441	+1	+27	765760560131939	-1	+38
4449676157	-1	-15	3713054321579	-1	-51	1140417231387373	-1	-82
5045920247	+1	+76	3729819224423	+1	+77	1170553064286511	+1	-84
5409537149	-1	+66	4006528141163	-1	+17	1302848719581529	+1	+38
8843450093	-1	-20	4169357937293	-1	-27	1680898792774051	-1	+48
10048450537	+1	+82	5216344035949	-1	+93	1885825033325021	-1	-79
10329891503	+1	+79	5240305919047	+1	-95	3411159925463651	-1	-88
11214704947	-1	+56	7355288787229	-1	-68	3723113065138349	-1	+18
20051397221	-1	-46	7876427903107	-1	-48	3948546628939699	-1	+93
20366156849	+1	-95	8851776421399	+1	-81	4032459967159163	-1	+86
36673326289	+1	-45	11344191252809	+1	-92	4150209531584437	-1	-24
49819566449	+1	+27	15056776355693	-1	-19	5131427559624857	+1	-18
53359191887	+1	+50	23639424831877	-1	-48	6517506365514181	-1	-29

$$2^{(p-1)/2} \equiv \pm 1 + Ap \pmod{p^2} \text{ and } |A| \leq 1000$$

$$p > 3e15$$

p	± 1	A	p	± 1	A
3113440825206487	+1	+887	6941091684197179	-1	+516
3173788761759379	-1	+792	7191640994464429	-1	+406
3281465623326827	-1	+580	7284911154276809	+1	+991
3317543516011981	-1	-750	7399615392955711	+1	+772
3508559613958337	+1	-393	7428722701584719	+1	-689
3522008578854793	+1	+249	7517031824422381	-1	-163
3584947606208831	+1	-593	7589182338215419	-1	+909
3596116634982419	-1	+238	7653489434573371	-1	-455
3606350362143511	+1	-985	7795104211956571	-1	-615
3615682761793517	-1	-725	7915127223513593	+1	-359
3690728733648797	-1	+167	8032966652454847	+1	+634
3783824393973131	-1	-716	8260653636855281	+1	+246
3808852067010139	-1	-606	8835311569955267	-1	-749
3831027317277109	-1	-729	9023556630927257	+1	-721
3956087188482973	-1	-745	9198052005514109	-1	-521
4002406214080093	-1	-547	9216175795030147	-1	+228
4095949437075647	+1	+535	9249038118110041	+1	-174
4097229609590477	-1	+666	9307761637125733	-1	-632
4139674979655779	-1	+500	9397323099713261	-1	-970
4143792274787999	+1	+108	9430772952210167	+1	+131
4268733356999057	+1	+601	9440020844367887	+1	-483
4389970931341169	+1	-252	9931393139604017	+1	+684
4686562925594831	+1	-371	10062984118264067	-1	+135
4690605285430003	-1	+966	10104190765534121	+1	-154
4716670255419061	-1	-247	10150346305190233	+1	-216
4901556577749379	-1	-927	10170649426413139	-1	+564
4965931158433309	-1	+430	10513859699459159	+1	+672
5078844401054113	+1	+906	10705915049560331	-1	-883
5083735428486929	+1	-939	10804785673448881	+1	+734
5258715693439951	+1	-609	11794552811461601	+1	+257
5333734094863417	+1	-467	11847548266530187	-1	-761
5367369195612269	-1	-159	12502126885812367	+1	-910
5423711968552697	+1	-488	12511210575270119	+1	+687
5464249230405811	-1	-213	12653759927957219	-1	-119
5539428831517831	+1	+115	12685912950211691	-1	+474
5541846220990307	-1	+479	13072927131222137	+1	+331
5544680687900581	-1	-871	13239698823836141	-1	-329
5683778474515027	-1	-166	13311772026813653	-1	-348
5755502459289463	+1	+238			
5793958190595593	+1	+425			
5942481157969717	-1	-864			
5994441921772859	-1	+631			
6218549260130329	+1	+381			
6657180771913949	-1	+698			
6811483557714481	+1	+518			