A formula that gives numbers ended in 1,3,7,9

Consider the next formula:

$((p_n)^{8n} - 1) \mp p_x{}^{4n} = p$

Where P is a prime number by varying the number one by 3,5,9 it will give a series of numbers ended in 1,3,7,9.

sq=Table[j,{j,100000}]

sq1=Table[j,{j,9050}]

n=Select[sq,PrimeQ,(1000)]

sq=Table[j,{j,100000}]

b=Select[sq,PrimeQ,(1000)]

n1=(n^8-1)+(b^4)

x=Select[n1,CompositeQ,(1000)]

x11=Select[n1,PrimeQ,(1000)]

$((p_n)^{8n} - 1) \mp p_x{}^{4n} =$ ...1

Result:

271,6641,391249,5767201,214373521,815759281,6975840961,1698
3693361,78311265121,500247120241,852891960961,35124813280
81,7984928054881,11688203696401,23811291541441,6225969830
1841,146830449721681,191707326843121,406067697707761,6457
53556657441,806460120292321,1517108848856641,22522922795
97361,3936588868444321,7837433682906241,1082856716034120
1,12667700926427041,17181861929398801,19925626558060081,2
6584442092111681,67675234501163521,86730203763506161,124

097930319955681,139353667584984721,242935033242013201,27
0281038647016801,369145195180959601,498311415024032881,6
04967117738931361,802359179371836721,1053960289915339441
,1151936658896783761,1771197286983079681,192512295430646
4001,2268453125455125841,2459374193121357601,39287974803
72271921,6115597642364353921,7050287994933579121,7562821
651670085841,8686550891053956961,10645920231047075521,11
379844841934761281,15753961215783378001,1903114800396357
1201,22890010295325365281,27416893187817405361,290907104
10417771841,34660765699441531921,38873223858858348961,41
142576398467070161,54317648816690792401,7890545052652462
2001,87515123956784241121,92120163566584776481,101970394
099344491761,144086718367756636561,166356282582417170881
,210201493961487180241,220091573690375410801...

sq=Table[j,{j,100000}]

sq1=Table[j,{j,9050}]

n=Select[sq,PrimeQ,(1000)]

sq=Table[j,{j,100000}]

b=Select[sq,PrimeQ,(1000)]

n1=(n^8-3)+(b^4)

x=Select[n1,CompositeQ,(1000)]

x11=Select[n1,PrimeQ,(1000)]

$((p_n)^{8n} - 3) \mp {p_x}^{4n}$ =...9

Result:

{269,6639,391247,5767199,214373519,815759279,6975840959,169
83693359,78311265119,500247120239,852891960959,3512481328
079,7984928054879,11688203696399,23811291541439,622596983
01839,146830449721679,191707326843119,406067697707759,645
753556657439,806460120292319,1517108848856639,2252292279
597359,3936588868444319,7837433682906239,108285671603411

99,1266770092642 7039,17181861929398799,19925626558060079,
26584442092111679,67675234501163519,86730203763506159,12
409793031995 5679,13935366758498 4719,24293503324201 3199,2
70281038647016799,36914519518095 9599,49831141502403 2879,
60496711773893 1359,80235917937183 6719,

sq=Table[j,{j,100000}]

sq1=Table[j,{j,9050}]

n=Select[sq,PrimeQ,(1000)]

sq=Table[j,{j,100000}]

b=Select[sq,PrimeQ,(1000)]

n1=(n^8-5)+(b^4)

x=Select[n1,CompositeQ,(1000)]

x11=Select[n1,PrimeQ,(1000)]

$((p_n)^{8n}-5)\mp p_x{}^{4n} =$...7

Result:

{267,391245,5767197,214373517,815759277,6975840957,1698369
3357,78311265117,500247120237,852891960957,3512481328077,
7984928054877,11688203696397,23811291541437,622596983018
37,146830449721677,191707326843117,406067697707757,645753
556657437,806460120292317,1517108848856637,2252292279597
357,3936588868444317,7837433682906237,10828567160341197,1
2667700926427037,17181861929398797,19925626558060077,265
84442092111677,67675234501163517,86730203763506157,12409
7930319955677,13935366758498 4717,24293503324201 3197,2702
81038647016797,36914519518095 9597,49831141502403 2877,604
967117738931357,80235917937183 6717,105396028991533 9437,1
15193665889678 3757,177119728698307 9677,1925122954306463 9
97,226845312545512 5837,245937419312135 7597,3928797480372

271917,6115597642364353917,7050287994933579117,756282165 1670085837,8686550891053956957,1064592023104707551 7,1137 9844841934761277,1575396121578337799 7,1903114800396357111 97,2289001029532536527 7,...

sq=Table[j,{j,100000}]

sq1=Table[j,{j,9050}]

n=Select[sq,PrimeQ,(1000)]

sq=Table[j,{j,100000}]

b=Select[sq,PrimeQ,(1000)]

n1=(n^8-9)+(b^4)

x=Select[n1,CompositeQ,(1000)]

x11=Select[n1,PrimeQ,(1000)]

$((p_n)^{8\mathrm{n}} - 9) \mp p_x{}^{4\mathrm{n}} =$...3

Result:

{263,6633,391241,5767193,214373513,815759273,6975840953,169 83693353,78311265113,500247120233,852891960953,3512481328 073,7984928054873,11688203696393,23811291541433,622596983 01833,146830449721673,191707326843113,406067697707753,645 753556657433,806460120292313,1517108848856633,2252292279 597353,3936588868444313,7837433682906233,108285671603411 93,12667700926427033,17181861929398793,19925626558060073, 26584442092111673,67675234501163513,86730203763506153,12 409793031995567 3,13935366758498471 3,24293503324201319 3,2 70281038647016793,36914519518095959 3,49831141502403287 3, 60496711773893135 3,80235917937183671 3,105396028991533943 3,11519366588967837 53,17711972869830796 73,19251229543064 63993,22684531254551258 33,24593741931213575 93,3928797480 372271913,6115597642364353913,7050287994933579113,756282 1651670085833,8686550891053956953,1064592023104707551 3,1

1379844841934761273,15753961215783377993,190311480039635 71193,22890010295325365273,

A further analysis of the relation of numbers ending in 1,3,7,9 and the relation of the formula n^8+b^4-1 with respect to the modulus of their quotient in polynomial terms (n^6-n^5+2 *n^4-3*n^3+6*n^2-9*n+15), allows to reach a result that satisfies the necessary premise to have a primality test with 100% accuracy, when observe that when changing the values of n and b to odd and prime numbers alternately , that is , when n = compound odd and b = prime one obtains a number of consecutive numbers that in a progressive order always end in even numbers , being the first 30 numbers of a total of 100 pairs for one of the compositions of this relation, and in the other relation, when you have n= primes and b= compound odds, you have the rest of the numbers from the thirtieth or so for the remaining 70 referring numbers to the modulus equal to even numbers so that they act in a complementary and additive way to check if a number is an odd number compose sto, ie a non-cousin.

When the number n and b are both prime there is no result for the modulus equal to an even number. The same is true when both numbers are odd.

So we have a new primality test that uses the formula for the sequence of numbers of msiec frsot namjoshi , which can be extended to test the primality of numbers.

Here are the lines of the two programs that are used in a complementary way to check if a number is odd or even according to the module:

```
sq=Table[j,{j,100000}]

sq1=Table[j,{j,9050}]

sq2=Select[sq,CompositeQ,(10000)]

n=Select[sq2,OddQ,(100)]

sq=Table[j,{j,100000}]

sq2=Select[sq,CompositeQ,(10000)]
```

b=Select[sq,PrimeQ,(100)]

n1=(n^8-1)+(b^4)

n2=Mod[n1,n^6-n^5+2*n^4-3*n^3+6*n^2-9*n+15]

{477000,10672715,81851325,234724105,373562127,1253444721,1787205495,3430793235,8
123355285,13564943905,17258567271,27187898275,33707599017,61549509051,742805296
65,106383730125,175647992415,205763258277,279004392321,372788273005,42872574686
7,561734241631,640153199061,727495753035,932151982455,1327555025865,18538242959
31,2293248686935,2543563541757,2816255925555,45782870,65610342,108131750,963750
78,179980502,187731750,212315670,287746742,335742230,428792646,478640742,4960787
90,691730598,715585910,764933910,752504438,1127079270,1535078630,1673727366,1628
540982,1775940470,2039973206,2097408198,2523220710,2730224790,3086164022,347000
8790,3557538726,3979304678,4176488262,4277492150,5152671686,6582611238,69695032
70,7035028950,7250637270,8953806470,9742955526,11011537062,11232477110,11805298
886,12766182198,14043968582,15128621910,16132870118,16877185830,17966488070,197
58468966,20302383222,22263785750,24762436758,24816864630,27722490086,2817636075
8,29970505110,30940312310,32862128406,35625358838,36956627030,37525168422,38909
153990,43526543718,46403526390,47764739798,51384042630,53129006102,55966316150,
62246397606,63101991878,73365789462}

sq=Table[j,{j,100000}]

sq1=Table[j,{j,9050}]

sq2=Select[sq,CompositeQ,(10000)]

n=Select[sq,PrimeQ,(100)]

sq=Table[j,{j,100000}]

sq2=Select[sq,CompositeQ,(10000)]

b=Select[sq2,OddQ,(100)]

n1=(n^8-1)+(b^4)

n2=Mod[n1,n^6-n^5+2*n^4-3*n^3+6*n^2-9*n+15]

{45,548,4820,73487,516550,1157062,1416710,2182678,3820246,5056838,5840950,7275590,
7729270,12333142,12969830,14775382,19521862,21305750,22894006,26787254,28889782,

29622998,27344902,18706262,7528006,17487814,39253702,43818470,46227958,37483862,
4163302996267,5015850395591,6564183336201,7161302846895,10869882800445,1177625
0701875,14881674199317,18641417196151,21563275647171,26655136774661,3271190503
5335,34969196967325,48298980672011,51416793401281,58157243657741,6179412155699
5,87830521664631,122430401056555,136222613673527,143589889261725,1593230876993
85,185599526136075,195122211868641,249068024519375,287021596797857,32967688812
0531,377488897874469,394655454136251,450106607001997,490565400598361,511903953
057535,630561578799261,834486046285527,901922557715331,937307029391625,1011553
625291717,1311169562780575,1460472962639937,1740716030488367,1801817465986549,
1929392090657601,2134810855948835,2436774514200427,2685906482977005,2955912121
172815,3148189152513851,3456075388027389,3905269652794437,4147487859841841,466
9601486878009,5398204663810775,5554727060429325,6395250999307611,6575457802078
801,7141663627299075,7541253495584415,8175461487236705,9089673742639657,957778
0185078501,9829904990519931,10350770168084871,12053347489042715,13313223415804
851,13983170604958671,15407568503913255,16163881004582211,17356197077993109,19
961528940409241,20425880093960911,25025443174953621}