

Blog Entry © Tuesday, June 16, 2026, by James Pate Williams, Jr., More 64-Bit Pseudoprimes Found Using John Pollard's Factoring with Cubic Integers

☰ PollardCubicInteger64BitCPP

File Help

Rat:

Alg:

A-Lo:

A-Hi:

B-Lo:

B-Hi:

Show Factor Bases

Show Factoring

algebraic prime count = 20

1	1	[	1	0	I = 1
2	1	[	1	0	R = 2
3	1	[	1	0	X = 2
4	-2	[	0	1	Y = 5
5	-2	[	0	1	N = 10
6	-2	[	0	1	L = 4
7	-3	[	-1	1	F = 2
8	-3	[	-1	1	C = 5
9	-3	[	-1	1	N = 10
10	-31	[	-95	-88	I = 2
11	-31	[	-87	69	R = 6
12	31	[	-61	-27	X = 2
13	43	[	-93	-2	Y = 109
14	-43	[	-55	44	N = 218
15	-43	[	-55	71	L = 8
16	109	[	-59	-4	F = 2
17	109	[	-55	-55	C = 109
18	-109	[	-47	37	N = 218
19	-127	[	-95	76	
20	127	[	-83	-81	I = 3
21	-127	[	-79	-6	R = 8
22	-157	[	-75	-57	X = 2
23	-157	[	-69	54	Y = 257

PollardCubicInteger64BitCPP

File Help

Rat:

Alg:

A-Lo:

A-Hi:

B-Lo:

B-Hi:

Show Factor Bases

Show Factoring

```

algebraic prime count = 20
  1      1      [      1      0
  2      1      [      1      0
  3      1      [      1      0
  4     -2      [      0      1
  5     -2      [      0      1
  6     -2      [      0      1
  7     -3      [     -1      1
  8     -3      [     -1      1
  9     -3      [     -1      1
 10    -31      [    -95     -88
 11    -31      [    -87     69
 12     31      [    -61    -27
 13     43      [    -93     -2
 14    -43      [    -55     44
 15    -43      [    -55     71
 16    109      [    -59     -4
 17    109      [    -55    -55
 18   -109      [    -47     37
 19   -127      [    -95     76
 20    127      [    -83    -81
 21   -127      [    -79     -6
 22   -157      [    -75    -57
 23   -157      [    -69     54
    
```

```

Y = 384581
N = 120188100377
L = 37
F = 312517
C = 384581
N = 120188100377
I = 147
R = 4733
X = 314603
Y = 337013
N = 106025300839
L = 37
F = 314603
C = 337013
N = 106025300839
factoring time in
I is an index, R =
Y is a cofactor, F
L = the bit length
N is the number fa
    
```

Factor bases:

algebraic prime count = 20

1	1	[	1	0	0	1
]						
2	1	[	1	0	0	1
]						
3	1	[	1	0	0	1
]						
4	-2	[	0	1	0	2
]						
5	-2	[	0	1	0	2
]						
6	-2	[	0	1	0	2
]						
7	-3	[	-1	1	0	3
]						

]	8	-3	[	-1	1	0	3
]	9	-3	[	-1	1	0	3
]	10	-31	[	-95	-88	-10	31
]	11	-31	[	-87	69	-55	31
]	12	31	[	-61	-27	17	31
]	13	43	[	-93	-2	57	43
]	14	-43	[	-55	44	-35	43
]	15	-43	[	-55	71	91	43
]	16	109	[	-59	-4	34	109
]	17	109	[	-55	-55	-9	109
]	18	-109	[	-47	37	-30	109
]	19	-127	[	-95	76	-60	127
]	20	127	[	-83	-81	-12	127
]	21	-127	[	-79	-6	45	127
]	22	-157	[	-75	-57	2	157
]	23	-157	[	-69	54	-43	157
]	24	157	[	-51	-9	25	157
]	25	223	[	-81	-58	5	223
]	26	-223	[	-81	-29	28	223
]	27	-223	[	-63	50	-39	223
]	28	229	[	-97	49	100	229
]	29	-229	[	-83	45	88	229
]	30	-229	[	-83	65	-52	229

]	31	5	[	-77	17	62	5
]	32	-5	[	-49	39	-31	5
]	33	1	[	1	0	0	1
]	34	-11	[	-89	-53	14	11
]	35	1331	[	-77	22	66	11
]	36	1	[	1	0	0	1
]	37	4913	[	-95	-68	6	17
]	38	-17	[	-67	53	-42	17
]	39	1	[	1	0	0	1
]	40	12167	[	-77	-5	45	23
]	41	-23	[	-67	1	43	23
]	42	1	[	1	0	0	1
]	43	29	[	-99	-37	33	29
]	44	-29	[	-81	64	-51	29
]	45	1	[	1	0	0	1
]	46	68921	[	-41	-41	0	41
]	47	41	[	-39	-36	-4	41
]	48	1	[	1	0	0	1
]	49	-47	[	-63	-50	0	47
]	50	-47	[	-63	50	-40	47
]	51	1	[	1	0	0	1
]	52	53	[	-67	-62	-7	53
]	53	148877	[	-53	-53	0	53

]	54	1	[	1	0	0	1
]	55	205379	[	-59	-59	0	59
]	56	205379	[	-49	75	93	59
]	57	1	[	1	0	0	1
]	58	-71	[	-89	71	-56	71
]	59	357911	[	-71	-71	0	71
]	60	1	[	1	0	0	1

] rational prime count = 100

0	-1
1	2
2	3
3	5
4	7
5	11
6	13
7	17
8	19
9	23
10	29
11	31
12	37
13	41
14	43
15	47
16	53
17	59
18	61
19	67
20	71
21	73
22	79
23	83
24	89
25	97
26	101
27	103
28	107
29	109
30	113
31	127

32	131
33	137
34	139
35	149
36	151
37	157
38	163
39	167
40	173
41	179
42	181
43	191
44	193
45	197
46	199
47	211
48	223
49	227
50	229
51	233
52	239
53	241
54	251
55	257
56	263
57	269
58	271
59	277
60	281
61	283
62	293
63	307
64	311
65	313
66	317
67	331
68	337
69	347
70	349
71	353
72	359
73	367
74	373
75	379
76	383
77	389
78	397

79	401
80	409
81	419
82	421
83	431
84	433
85	439
86	443
87	449
88	457
89	461
90	463
91	467
92	479
93	487
94	491
95	499
96	503
97	509
98	521
99	523

factor base time in milliseconds = 538

I had an error in my bit length computation which I corrected. The test code is shown below:

```
static int BitLength(long long n)
{
    int length0 = (int)log2(n) + 1;
    int length1 = 0;

    while (n > 0)
    {
        int digit = n % 2;
        int diviN = n >>= 1;
        length1++;
    }

    return length1;
}
```

My new calculation in the application is performed by the line:

```
int length = (int)log2(biN) + 1;
```

List of 147 pseudoprimes beginning with 10 and ending with 106025300839 :

I = 1
R = 2
X = 2
Y = 5
N = 10
L = 4
F = 2
C = 5
N = 10

I = 2
R = 6
X = 2
Y = 109
N = 218
L = 8
F = 2
C = 109
N = 218

I = 3
R = 8
X = 2
Y = 257
N = 514
L = 10
F = 2
C = 257
N = 514

I = 4
R = 14
X = 2
Y = 1373
N = 2746
L = 12
F = 2
C = 1373
N = 2746

I = 5
R = 18
X = 2
Y = 2917
N = 5834

L = 13
F = 2
C = 2917
N = 5834

I = 6
R = 20
X = 2
Y = 4001
N = 8002
L = 13
F = 2
C = 4001
N = 8002

I = 7
R = 38
X = 2
Y = 27437
N = 54874
L = 16
F = 2
C = 27437
N = 54874

I = 8
R = 50
X = 2
Y = 62501
N = 125002
L = 17
F = 2
C = 62501
N = 125002

I = 9
R = 68
X = 2
Y = 157217
N = 314434
L = 19
F = 2
C = 157217
N = 314434

I = 10
R = 74

X = 2
Y = 202613
N = 405226
L = 19
F = 2
C = 202613
N = 405226

I = 11
R = 78
X = 2
Y = 237277
N = 474554
L = 19
F = 2
C = 237277
N = 474554

I = 12
R = 84
X = 2
Y = 296353
N = 592706
L = 20
F = 2
C = 296353
N = 592706

I = 13
R = 98
X = 2
Y = 470597
N = 941194
L = 20
F = 2
C = 470597
N = 941194

I = 14
R = 13
X = 3
Y = 733
N = 2199
L = 12
F = 3
C = 733
N = 2199

I = 15
R = 19
X = 3
Y = 2287
N = 6861
L = 13
F = 3
C = 2287
N = 6861

I = 16
R = 25
X = 3
Y = 5209
N = 15627
L = 14
F = 3
C = 5209
N = 15627

I = 17
R = 31
X = 3
Y = 9931
N = 29793
L = 15
F = 3
C = 9931
N = 29793

I = 18
R = 49
X = 3
Y = 39217
N = 117651
L = 17
F = 3
C = 39217
N = 117651

I = 19
R = 91
X = 3
Y = 251191
N = 753573
L = 20

F = 3
C = 251191
N = 753573

I = 20
R = 17
X = 5
Y = 983
N = 4915
L = 13
F = 5
C = 983
N = 4915

I = 21
R = 57
X = 5
Y = 37039
N = 185195
L = 18
F = 5
C = 37039
N = 185195

I = 22
R = 87
X = 5
Y = 131701
N = 658505
L = 20
F = 5
C = 131701
N = 658505

I = 23
R = 15
X = 11
Y = 307
N = 3377
L = 12
F = 11
C = 307
N = 3377

I = 24
R = 59
X = 11

Y = 18671
N = 205381
L = 18
F = 11
C = 18671
N = 205381

I = 25
R = 81
X = 11
Y = 48313
N = 531443
L = 20
F = 11
C = 48313
N = 531443

I = 26
R = 9
X = 17
Y = 43
N = 731
L = 10
F = 17
C = 43
N = 731

I = 27
R = 111
X = 17
Y = 80449
N = 1367633
L = 21
F = 17
C = 80449
N = 1367633

I = 28
R = 53
X = 23
Y = 6473
N = 148879
L = 18
F = 23
C = 6473
N = 148879

I = 29
R = 99
X = 23
Y = 42187
N = 970301
L = 20
F = 23
C = 42187
N = 970301

I = 30
R = 119
X = 29
Y = 58109
N = 1685161
L = 21
F = 29
C = 58109
N = 1685161

I = 31
R = 11
X = 31
Y = 43
N = 1333
L = 11
F = 31
C = 43
N = 1333

I = 32
R = 89
X = 31
Y = 22741
N = 704971
L = 20
F = 31
C = 22741
N = 704971

I = 33
R = 135
X = 31
Y = 79367
N = 2460377
L = 22
F = 31

C = 79367
N = 2460377

I = 34
R = 159
X = 41
Y = 98041
N = 4019681
L = 22
F = 41
C = 98041
N = 4019681

I = 35
R = 23
X = 43
Y = 283
N = 12169
L = 14
F = 43
C = 283
N = 12169

I = 36
R = 195
X = 43
Y = 172439
N = 7414877
L = 23
F = 43
C = 172439
N = 7414877

I = 37
R = 261
X = 47
Y = 378289
N = 17779583
L = 25
F = 47
C = 378289
N = 17779583

I = 38
R = 35
X = 53
Y = 809

N = 42877
L = 16
F = 53
C = 809
N = 42877

I = 39
R = 21
X = 59
Y = 157
N = 9263
L = 14
F = 59
C = 157
N = 9263

I = 40
R = 93
X = 71
Y = 11329
N = 804359
L = 20
F = 71
C = 11329
N = 804359

I = 41
R = 33
X = 83
Y = 433
N = 35939
L = 16
F = 83
C = 433
N = 35939

I = 42
R = 251
X = 89
Y = 177677
N = 15813253
L = 24
F = 89
C = 177677
N = 15813253

I = 43

R = 75
X = 101
Y = 4177
N = 421877
L = 19
F = 101
C = 4177
N = 421877

I = 44
R = 101
X = 107
Y = 9629
N = 1030303
L = 20
F = 107
C = 9629
N = 1030303

I = 45
R = 51
X = 109
Y = 1217
N = 132653
L = 18
F = 109
C = 1217
N = 132653

I = 46
R = 161
X = 109
Y = 38287
N = 4173283
L = 22
F = 109
C = 38287
N = 4173283

I = 47
R = 371
X = 113
Y = 451901
N = 51064813
L = 26
F = 113
C = 451901

N = 51064813

I = 48
R = 339
X = 131
Y = 297391
N = 38958221
L = 26
F = 131
C = 297391
N = 38958221

I = 49
R = 39
X = 137
Y = 433
N = 59321
L = 16
F = 137
C = 433
N = 59321

I = 50
R = 41
X = 157
Y = 439
N = 68923
L = 17
F = 157
C = 439
N = 68923

I = 51
R = 335
X = 157
Y = 239461
N = 37595377
L = 26
F = 157
C = 239461
N = 37595377

I = 52
R = 185
X = 173
Y = 36599
N = 6331627

L = 23
F = 173
C = 36599
N = 6331627

I = 53
R = 155
X = 223
Y = 16699
N = 3723877
L = 22
F = 223
C = 16699
N = 3723877

I = 54
R = 131
X = 229
Y = 9817
N = 2248093
L = 22
F = 229
C = 9817
N = 2248093

I = 55
R = 201
X = 251
Y = 32353
N = 8120603
L = 23
F = 251
C = 32353
N = 8120603

I = 56
R = 255
X = 307
Y = 54011
N = 16581377
L = 24
F = 307
C = 54011
N = 16581377

I = 57
R = 149

X = 347
Y = 9533
N = 3307951
L = 22
F = 347
C = 9533
N = 3307951

I = 58
R = 359
X = 431
Y = 107351
N = 46268281
L = 26
F = 431
C = 107351
N = 46268281

I = 59
R = 423
X = 457
Y = 165617
N = 75686969
L = 27
F = 457
C = 165617
N = 75686969

I = 60
R = 381
X = 467
Y = 118429
N = 55306343
L = 26
F = 467
C = 118429
N = 55306343

I = 61
R = 573
X = 479
Y = 392761
N = 188132519
L = 28
F = 479
C = 392761
N = 188132519

I = 62
R = 465
X = 557
Y = 180511
N = 100544627
L = 27
F = 557
C = 180511
N = 100544627

I = 63
R = 581
X = 821
Y = 238883
N = 196122943
L = 28
F = 821
C = 238883
N = 196122943

I = 64
R = 239
X = 997
Y = 13693
N = 13651921
L = 24
F = 997
C = 13693
N = 13651921

I = 65
R = 233
X = 1031
Y = 12269
N = 12649339
L = 24
F = 1031
C = 12269
N = 12649339

I = 66
R = 593
X = 1051
Y = 198409
N = 208527859
L = 28

F = 1051
C = 198409
N = 208527859

I = 67
R = 591
X = 1093
Y = 188861
N = 206425073
L = 28
F = 1093
C = 188861
N = 206425073

I = 68
R = 471
X = 1399
Y = 74687
N = 104487113
L = 27
F = 1399
C = 74687
N = 104487113

I = 69
R = 795
X = 1423
Y = 353099
N = 502459877
L = 29
F = 1423
C = 353099
N = 502459877

I = 70
R = 393
X = 1439
Y = 42181
N = 60698459
L = 26
F = 1439
C = 42181
N = 60698459

I = 71
R = 285
X = 1471

Y = 15737
N = 23149127
L = 25
F = 1471
C = 15737
N = 23149127

I = 72
R = 225
X = 1627
Y = 7001
N = 11390627
L = 24
F = 1627
C = 7001
N = 11390627

I = 73
R = 165
X = 1657
Y = 2711
N = 4492127
L = 23
F = 1657
C = 2711
N = 4492127

I = 74
R = 599
X = 1699
Y = 126499
N = 214921801
L = 28
F = 1699
C = 126499
N = 214921801

I = 75
R = 659
X = 1777
Y = 161053
N = 286191181
L = 29
F = 1777
C = 161053
N = 286191181

I = 76
R = 401
X = 1801
Y = 35803
N = 64481203
L = 26
F = 1801
C = 35803
N = 64481203

I = 77
R = 273
X = 1889
Y = 10771
N = 20346419
L = 25
F = 1889
C = 10771
N = 20346419

I = 78
R = 203
X = 2027
Y = 4127
N = 8365429
L = 23
F = 2027
C = 4127
N = 8365429

I = 79
R = 221
X = 2089
Y = 5167
N = 10793863
L = 24
F = 2089
C = 5167
N = 10793863

I = 80
R = 695
X = 2141
Y = 156797
N = 335702377
L = 29
F = 2141

C = 156797
N = 335702377

I = 81
R = 735
X = 2549
Y = 155773
N = 397065377
L = 29
F = 2549
C = 155773
N = 397065377

I = 82
R = 545
X = 3023
Y = 53549
N = 161878627
L = 28
F = 3023
C = 53549
N = 161878627

I = 83
R = 309
X = 3373
Y = 8747
N = 29503631
L = 25
F = 3373
C = 8747
N = 29503631

I = 84
R = 971
X = 3911
Y = 234083
N = 915498613
L = 30
F = 3911
C = 234083
N = 915498613

I = 85
R = 929
X = 4129
Y = 194179

N = 801765091
L = 30
F = 4129
C = 194179
N = 801765091

I = 86
R = 981
X = 4759
Y = 198377
N = 944076143
L = 30
F = 4759
C = 198377
N = 944076143

I = 87
R = 413
X = 4919
Y = 14321
N = 70444999
L = 27
F = 4919
C = 14321
N = 70444999

I = 88
R = 765
X = 5639
Y = 79393
N = 447697127
L = 29
F = 5639
C = 79393
N = 447697127

I = 89
R = 809
X = 5843
Y = 90617
N = 529475131
L = 29
F = 5843
C = 90617
N = 529475131

I = 90

R = 813
X = 5903
Y = 91033
N = 537367799
L = 30
F = 5903
C = 91033
N = 537367799

I = 91
R = 951
X = 6037
Y = 142469
N = 860085353
L = 30
F = 6037
C = 142469
N = 860085353

I = 92
R = 1173
X = 6323
Y = 255253
N = 1613964719
L = 31
F = 6323
C = 255253
N = 1613964719

I = 93
R = 935
X = 6569
Y = 124433
N = 817400377
L = 30
F = 6569
C = 124433
N = 817400377

I = 94
R = 1175
X = 7307
Y = 222011
N = 1622234377
L = 31
F = 7307
C = 222011

N = 1622234377

I = 95

R = 563

X = 7537

Y = 23677

N = 178453549

L = 28

F = 7537

C = 23677

N = 178453549

I = 96

R = 1311

X = 7699

Y = 292667

N = 2253243233

L = 32

F = 7699

C = 292667

N = 2253243233

I = 97

R = 849

X = 8629

Y = 70919

N = 611960051

L = 30

F = 8629

C = 70919

N = 611960051

I = 98

R = 891

X = 8707

Y = 81239

N = 707347973

L = 30

F = 8707

C = 81239

N = 707347973

I = 99

R = 615

X = 9133

Y = 25469

N = 232608377

L = 28
F = 9133
C = 25469
N = 232608377

I = 100
R = 1169
X = 9551
Y = 167261
N = 1597509811
L = 31
F = 9551
C = 167261
N = 1597509811

I = 101
R = 821
X = 11329
Y = 48847
N = 553387663
L = 30
F = 11329
C = 48847
N = 553387663

I = 102
R = 1439
X = 11783
Y = 252887
N = 2979767521
L = 32
F = 11783
C = 252887
N = 2979767521

I = 103
R = 633
X = 15227
Y = 16657
N = 253636139
L = 28
F = 15227
C = 16657
N = 253636139

I = 104
R = 1613

X = 15601
Y = 268999
N = 4196653399
L = 32
F = 15601
C = 268999
N = 4196653399

I = 105
R = 933
X = 16421
Y = 49459
N = 812166239
L = 30
F = 16421
C = 49459
N = 812166239

I = 106
R = 1773
X = 17191
Y = 324209
N = 5573476919
L = 33
F = 17191
C = 324209
N = 5573476919

I = 107
R = 855
X = 18133
Y = 34469
N = 625026377
L = 30
F = 18133
C = 34469
N = 625026377

I = 108
R = 1629
X = 20347
Y = 212453
N = 4322781191
L = 33
F = 20347
C = 212453
N = 4322781191

I = 109
R = 1631
X = 21059
Y = 206027
N = 4338722593
L = 33
F = 21059
C = 206027
N = 4338722593

I = 110
R = 1421
X = 21193
Y = 135391
N = 2869341463
L = 32
F = 21193
C = 135391
N = 2869341463

I = 111
R = 1191
X = 22963
Y = 73571
N = 1689410873
L = 31
F = 22963
C = 73571
N = 1689410873

I = 112
R = 1241
X = 25759
Y = 74197
N = 1911240523
L = 31
F = 25759
C = 74197
N = 1911240523

I = 113
R = 1209
X = 26347
Y = 67073
N = 1767172331
L = 31

F = 26347
C = 67073
N = 1767172331

I = 114
R = 1661
X = 26371
Y = 173773
N = 4582567783
L = 33
F = 26371
C = 173773
N = 4582567783

I = 115
R = 2195
X = 26921
Y = 392837
N = 10575564877
L = 34
F = 26921
C = 392837
N = 10575564877

I = 116
R = 1235
X = 28463
Y = 66179
N = 1883652877
L = 31
F = 28463
C = 66179
N = 1883652877

I = 117
R = 1659
X = 29027
Y = 157303
N = 4566034181
L = 33
F = 29027
C = 157303
N = 4566034181

I = 118
R = 1101
X = 30971

Y = 43093
N = 1334633303
L = 31
F = 30971
C = 43093
N = 1334633303

I = 119
R = 2453
X = 33601
Y = 439279
N = 14760213679
L = 34
F = 33601
C = 439279
N = 14760213679

I = 120
R = 1211
X = 40559
Y = 43787
N = 1775956933
L = 31
F = 40559
C = 43787
N = 1775956933

I = 121
R = 1745
X = 43781
Y = 121367
N = 5313568627
L = 33
F = 43781
C = 121367
N = 5313568627

I = 122
R = 1865
X = 46831
Y = 138517
N = 6486889627
L = 33
F = 46831
C = 138517
N = 6486889627

I = 123
R = 2873
X = 48341
Y = 490559
N = 23714112619
L = 35
F = 48341
C = 490559
N = 23714112619

I = 124
R = 1595
X = 50549
Y = 80273
N = 4057719877
L = 32
F = 50549
C = 80273
N = 4057719877

I = 125
R = 1923
X = 50671
Y = 140339
N = 7111117469
L = 33
F = 50671
C = 140339
N = 7111117469

I = 126
R = 1545
X = 54013
Y = 68279
N = 3687953627
L = 32
F = 54013
C = 68279
N = 3687953627

I = 127
R = 1689
X = 57649
Y = 83579
N = 4818245771
L = 33
F = 57649

C = 83579
N = 4818245771

I = 128
R = 2003
X = 59971
Y = 133999
N = 8036054029
L = 33
F = 59971
C = 133999
N = 8036054029

I = 129
R = 2139
X = 64033
Y = 152837
N = 9786611621
L = 34
F = 64033
C = 152837
N = 9786611621

I = 130
R = 2459
X = 66931
Y = 222151
N = 14868788581
L = 34
F = 66931
C = 222151
N = 14868788581

I = 131
R = 2981
X = 68449
Y = 387007
N = 26490242143
L = 35
F = 68449
C = 387007
N = 26490242143

I = 132
R = 2585
X = 87869
Y = 196583

N = 17273551627
L = 35
F = 87869
C = 196583
N = 17273551627

I = 133
R = 2789
X = 93229
Y = 232699
N = 21694295071
L = 35
F = 93229
C = 232699
N = 21694295071

I = 134
R = 2979
X = 100129
Y = 264029
N = 26436959741
L = 35
F = 100129
C = 264029
N = 26436959741

I = 135
R = 3405
X = 114797
Y = 343891
N = 39477655127
L = 36
F = 114797
C = 343891
N = 39477655127

I = 136
R = 3695
X = 117163
Y = 430579
N = 50447927377
L = 36
F = 117163
C = 430579
N = 50447927377

I = 137

R = 3725
X = 128603
Y = 401909
N = 51686703127
L = 36
F = 128603
C = 401909
N = 51686703127

I = 138
R = 3195
X = 131543
Y = 247939
N = 32614639877
L = 35
F = 131543
C = 247939
N = 32614639877

I = 139
R = 3663
X = 174311
Y = 281959
N = 49148555249
L = 36
F = 174311
C = 281959
N = 49148555249

I = 140
R = 3563
X = 174907
Y = 258607
N = 45232174549
L = 36
F = 174907
C = 258607
N = 45232174549

I = 141
R = 3281
X = 181837
Y = 194239
N = 35319837043
L = 36
F = 181837
C = 194239

N = 35319837043

I = 142
R = 4301
X = 229253
Y = 347051
N = 79562482903
L = 37
F = 229253
C = 347051
N = 79562482903

I = 143
R = 4163
X = 252209
Y = 286061
N = 72147158749
L = 37
F = 252209
C = 286061
N = 72147158749

I = 144
R = 4499
X = 266837
Y = 341273
N = 91064263501
L = 37
F = 266837
C = 341273
N = 91064263501

I = 145
R = 4869
X = 311407
Y = 370673
N = 115430166911
L = 37
F = 311407
C = 370673
N = 115430166911

I = 146
R = 4935
X = 312517
Y = 384581
N = 120188100377

L = 37
F = 312517
C = 384581
N = 120188100377

I = 147
R = 4733
X = 314603
Y = 337013
N = 106025300839
L = 37
F = 314603
C = 337013
N = 106025300839

factoring time in milliseconds = 3293931

I is an index, R = is to be cubed, X = is a factor,
Y is a cofactor, $R^3 + 2 = N$ which is also $X * Y$,
L = the bit length of N, F is a factor, C is a cofactor,
N is the number factored also $N = F * C$