ACCURACY OF GHOST SERIES ($p = 3$ AND $N = 1$)

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ABSTRACT. We present data showing how "accurate" the ghost series predictions are.

We present a series of tables on the first 12 coefficients of the ghost series for $p = 3$ and level $N = 1$. The tables take the form:

TABLE 0.1. Sample (separated) table

k	$m_i(k)$	relative loc. of zeros
⋮	⋮	⋮
20	0	6, 6, 5, 5, 4, ...
22	0	6, 6, 5, 5, 4, ...
24	1	**9** 6, 5, 5, 4, ...
26	1	**9** 6, 5, 5, 4, ...
28	2	**10** **7** 5, 5, 4, ...
30	3	**11** **10** **8** 5, 4, ...
32	2	**16** **13** 6, 5, 4, ...
34	0	6, 6, 5, 5, 4, ...
36	1	**14** 6, 5, 5, 4, ...
38	0	6, 6, 5, 5, 4, ...
40	0	6, 6, 5, 5, 4, ...
⋮	⋮	⋮

The first column is a list of (even) integers k. The second column is the multiplicity of k as a zero of the ghost series in the i-th index. The third column is the (decreasing) list of numbers $v_p(w_\kappa - w_k)$ where κ runs over the finitely many solutions to $\mathrm{tr}(\wedge^i U_p)(\kappa) = 0$. For a given k, if $m_i(k) > 0$ then we have bolded, underlined and separated out the largest $m_i(k)$-many values in the third column to illustrate the link between the "ghost zeros" and the true zeros of the characteristic series of U_p.

The data is truncated in the following two ways. First, list of k are exactly those within 10 of some predicted zero of the ghost coefficient. Second, the number of terms in the third column is always exactly two more than the highest multiplicity of a ghost zero.

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1. The tables

Table 1.1. Coefficient $i = 1$ for $p = 3$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros
0	0	1, 1, 0, ...
2	0	2, 1, 0, ...
4	0	2, 1, 0, ...
6	0	1, 1, 0, ...
8	0	2, 1, 0, ...
10	1	**8** 1, 0, ...
12	0	1, 1, 0, ...
14	1	**5** 1, 0, ...
16	0	2, 1, 0, ...
18	0	1, 1, 0, ...
20	0	2, 1, 0, ...
22	0	2, 1, 0, ...
24	0	1, 1, 0, ...

Table 1.2. Coefficient $i = 2$ for $p = 3$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros
4	0	3, 2, 1, ...
6	0	2, 1, 1, ...
8	0	3, 2, 2, ...
10	0	2, 2, 1, ...
12	0	2, 1, 1, ...
14	1	**5** 2, 2, ...
16	1	**8** 2, 1, ...
18	1	**5** 1, 1, ...
20	1	**5** 2, 2, ...
22	1	**14** 2, 1, ...
24	0	2, 1, 1, ...
26	1	**8** 2, 2, ...
28	0	2, 2, 1, ...
30	0	2, 1, 1, ...
32	0	3, 2, 2, ...
34	0	3, 2, 1, ...
36	0	3, 1, 1, ...

TABLE 1.3. Coefficient $i = 3$ for $p = 3$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros
8	0	3, 3, 2, 2, ...
10	0	3, 2, 2, 2, ...
12	0	3, 2, 2, 1, ...
14	0	3, 2, 2, 2, ...
16	0	3, 2, 2, 2, ...
18	1	**5** 2, 2, 1, ...
20	1	**5** 3, 2, 2, ...
22	2	**5.5** **5.5** 2, 2, ...
24	1	**5** 2, 2, 1, ...
26	2	**8** **6** 2, 2, ...
28	1	**16** 2, 2, 2, ...
30	1	**8** 2, 2, 1, ...
32	1	**10** 2, 2, 2, ...
34	1	**28** 2, 2, 2, ...
36	0	3, 2, 2, 1, ...
38	1	**12** 3, 2, 2, ...
40	0	3, 3, 2, 2, ...
42	0	3, 2, 2, 1, ...
44	0	3, 3, 2, 2, ...
46	0	3, 2, 2, 2, ...
48	0	3, 2, 2, 1, ...

TABLE 1.4. Coefficient $i = 4$ for $p = 3$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros		
12	0			3, 3, 2, 2, ...
14	0			3, 3, 3, 2, ...
16	0			3, 3, 2, 2, ...
18	0			3, 2, 2, 2, ...
20	0			3, 3, 2, 2, ...
22	1		**14**	3, 2, 2, ...
24	1		**5**	3, 2, 2, ...
26	2	**8**	**6**	3, 2, ...
28	2	**5**	**5**	3, 2, ...
30	2	**8**	**6**	2, 2, ...
32	2	**10**	**5**	3, 2, ...
34	2	**9.5**	**9.5**	2, 2, ...
36	1		**10**	2, 2, 2, ...
38	2	**13**	**10**	2, 2, ...
40	1		**31**	3, 2, 2, ...
42	1		**12**	3, 2, 2, ...
44	1		**12**	3, 3, 2, ...
46	1		**25**	3, 3, 2, ...
48	0			3, 3, 2, 2, ...
50	1		**14**	3, 3, 2, ...
52	0			3, 3, 2, 2, ...
54	0			3, 2, 2, 2, ...
56	0			3, 3, 2, 2, ...
58	0			3, 3, 2, 2, ...
60	0			3, 3, 2, 2, ...

TABLE 1.5. Coefficient $i = 5$ for $p = 3$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros			
16	0				3, 3, 3, 3, 2, ...
18	0				3, 3, 3, 2, 2, ...
20	0				3, 3, 3, 3, 2, ...
22	0				3, 3, 3, 2, 2, ...
24	0				3, 3, 2, 2, 2, ...
26	1			**8**	3, 3, 3, 2, ...
28	1			**16**	3, 3, 2, 2, ...
30	2		**8**	**6**	3, 2, 2, ...
32	2		**10**	**5**	3, 3, 2, ...
34	3	**22**	**5.5**	**5.5**	3, 2, ...
36	2		**10**	**5**	3, 2, 2, ...
38	3	**13**	**10**	**5**	3, 2, ...
40	2		**10**	**10**	3, 2, 2, ...
42	2		**13**	**10**	2, 2, 2, ...
44	2		**13**	**9**	3, 3, 2, ...
46	2		**12**	**12**	3, 2, 2, ...
48	1			**12**	3, 3, 2, 2, ...
50	2		**14**	**12**	3, 3, 2, ...
52	1			**26**	3, 3, 3, 2, ...
54	1			**14**	3, 3, 2, 2, ...
56	1			**14**	3, 3, 3, 2, ...
58	1			**34**	3, 3, 2, 2, ...
60	0				3, 3, 2, 2, 2, ...
62	1			**18**	3, 3, 3, 2, ...
64	0				3, 3, 3, 2, 2, ...
66	0				3, 3, 3, 2, 2, ...
68	0				3, 3, 3, 3, 2, ...
70	0				3, 3, 3, 3, 2, ...
72	0				3, 3, 3, 2, 2, ...

TABLE 1.6. Coefficient $i = 6$ for $p = 3$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros			
20	0				4, 3, 3, 3, 3, ...
22	0				3, 3, 3, 3, 3, ...
24	0				3, 3, 3, 3, 2, ...
26	0				3, 3, 3, 3, 3, ...
28	0				3, 3, 3, 3, 2, ...
30	1			**8**	3, 3, 3, 2, ...
32	1			**10**	3, 3, 3, 3, ...
34	2		**9.5**	**9.5**	3, 3, 3, ...
36	2		**10**	**5**	3, 3, 2, ...
38	3	**13**	**10**	**5**	3, 3, ...
40	3	**22**	**6**	**6**	3, 3, ...
42	3	**13**	**10**	**5**	3, 2, ...
44	3	**13**	**9**	**7**	3, 3, ...
46	3	**25**	**10.5**	**10.5**	3, 2, ...
48	2		**13**	**9**	3, 3, 2, ...
50	3	**13**	**13**	**10**	3, 3, ...
52	2		**12**	**12**	3, 3, 3, ...
54	2		**14**	**12**	3, 3, 2, ...
56	2		**14**	**12**	3, 3, 3, ...
58	2		**15**	**15**	3, 3, 3, ...
60	1			**14**	3, 3, 3, 2, ...
62	2		**18**	**16**	3, 3, 3, ...
64	1			**35**	3, 3, 3, 2, ...
66	1			**18**	3, 3, 3, 2, ...
68	1			**19**	3, 3, 3, 3, ...
70	1			**40**	3, 3, 3, 3, ...
72	0				3, 3, 3, 3, 2, ...
74	1			**21**	3, 3, 3, 3, ...
76	0				3, 3, 3, 3, 3, ...
78	0				3, 3, 3, 3, 2, ...
80	0				3, 3, 3, 3, 3, ...
82	0				3, 3, 3, 3, 2, ...
84	0				4, 3, 3, 3, 2, ...

TABLE 1.7. Coefficient $i = 7$ for $p = 3$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros				
24	0					4, 3, 3, 3, 3, 3, ...
26	0					4, 3, 3, 3, 3, 3, ...
28	0					4, 3, 3, 3, 3, 3, ...
30	0					3, 3, 3, 3, 3, 2, ...
32	0					4, 3, 3, 3, 3, 3, ...
34	1				**21**	3, 3, 3, 3, 3, ...
36	1				**10**	3, 3, 3, 3, 2, ...
38	2			**13**	**10**	3, 3, 3, 3, ...
40	2			**10**	**10**	3, 3, 3, 3, ...
42	3		**13**	**10**	**5**	3, 3, 3, ...
44	3		**13**	**9**	**7**	3, 3, 3, ...
46	4	**12.5**	**12.5**	**5.5**	**5.5**	3, 3, ...
48	3		**13**	**9**	**7**	3, 3, 2, ...
50	4	**14**	**13**	**10**	**6**	3, 3, ...
52	3		**26**	**10**	**10**	3, 3, 3, ...
54	3		**13**	**13**	**10**	3, 3, 2, ...
56	3		**13**	**13**	**10**	3, 3, 3, ...
58	3		**34**	**12**	**12**	3, 3, 3, ...
60	2			**14**	**12**	3, 3, 3, 3, ...
62	3		**18**	**16**	**12**	3, 3, 3, ...
64	2			**14.5**	**14.5**	3, 3, 3, 3, ...
66	2			**18**	**16**	3, 3, 3, 2, ...
68	2			**19**	**15**	3, 3, 3, 3, ...
70	2			**19**	**19**	3, 3, 3, 3, ...
72	1				**19**	3, 3, 3, 3, 2, ...
74	2			**22**	**19**	3, 3, 3, 3, ...
76	1				**40**	3, 3, 3, 3, 3, ...
78	1				**21**	3, 3, 3, 3, 3, ...
80	1				**21**	3, 3, 3, 3, 3, ...
82	1				**45**	3, 3, 3, 3, 3, ...
84	0					3, 3, 3, 3, 3, 2, ...
86	1				**25**	3, 3, 3, 3, 3, ...
88	0					4, 3, 3, 3, 3, 3, ...
90	0					4, 3, 3, 3, 3, 2, ...
92	0					4, 4, 3, 3, 3, 3, ...
94	0					4, 4, 3, 3, 3, 3, ...
96	0					4, 4, 4, 3, 3, 3, ...

TABLE 1.8. Coefficient $i = 8$ for $p = 3$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros				
28	0					4, 4, 3, 3, 3, 3, ...
30	0					4, 3, 3, 3, 3, 3, ...
32	0					4, 4, 3, 3, 3, 3, ...
34	0					4, 3, 3, 3, 3, 3, ...
36	0					4, 3, 3, 3, 3, 3, ...
38	1				**12**	4, 3, 3, 3, 3, ...
40	1				**21**	4, 3, 3, 3, 3, ...
42	2			**13**	**10**	3, 3, 3, 3, ...
44	2			**13**	**9**	4, 3, 3, 3, ...
46	3		**24**	**10.5**	**10.5**	3, 3, 3, ...
48	3		**13**	**9**	**7**	3, 3, 3, ...
50	4	**14**	**13**	**10**	**6**	3, 3, ...
52	4	**12.5**	**12.5**	**6.5**	**6.5**	3, 3, ...
54	4	**14**	**13**	**10**	**6**	3, 3, ...
56	4	**14**	**13**	**10**	**6**	3, 3, ...
58	4	**14.5**	**14.5**	**10**	**10**	3, 3, ...
60	3		**13**	**13**	**10**	3, 3, 3, ...
62	4	**18**	**15**	**13**	**9**	3, 3, ...
64	3		**35**	**12**	**12**	3, 3, 3, ...
66	3		**18**	**16**	**12**	3, 3, 3, ...
68	3		**19**	**15**	**12**	3, 3, 3, ...
70	3		**40**	**15.5**	**15.5**	3, 3, 3, ...
72	2			**19**	**15**	3, 3, 3, 3, ...
74	3		**22**	**19**	**15**	3, 3, 3, ...
76	2			**19**	**19**	3, 3, 3, 3, ...
78	2			**22**	**19**	3, 3, 3, 3, ...
80	2			**22**	**18**	3, 3, 3, 3, ...
82	2			**21**	**21**	3, 3, 3, 3, ...
84	1				**21**	3, 3, 3, 3, 3, ...
86	2			**25**	**21**	3, 3, 3, 3, ...
88	1				**48**	3, 3, 3, 3, 3, ...
90	1				**25**	3, 3, 3, 3, 3, ...
92	1				**25**	4, 3, 3, 3, 3, ...
94	1				**54**	4, 3, 3, 3, 3, ...
96	0					4, 4, 3, 3, 3, 3, ...
98	1				**28**	4, 4, 3, 3, 3, ...
100	0					4, 4, 4, 3, 3, 3, ...
102	0					4, 4, 4, 3, 3, 3, ...
104	0					4, 4, 4, 4, 3, 3, ...
106	0					4, 4, 4, 4, 3, 3, ...
108	0					4, 4, 4, 4, 3, 3, ...

TABLE 1.9. Coefficient $i = 9$ for $p = 3$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros					
32	0						4, 4, 4, 3, 3, 3, 3, ...
34	0						4, 4, 3, 3, 3, 3, 3, ...
36	0						4, 4, 3, 3, 3, 3, 3, ...
38	0						4, 4, 3, 3, 3, 3, 3, ...
40	0						4, 4, 3, 3, 3, 3, 3, ...
42	1					**12**	4, 3, 3, 3, 3, 3, ...
44	1					**12**	4, 4, 3, 3, 3, 3, ...
46	2				**12**	**12**	4, 3, 3, 3, 3, ...
48	2				**13**	**9**	4, 3, 3, 3, 3, ...
50	3			**13**	**13**	**10**	4, 3, 3, 3, ...
52	3			**25**	**10**	**10**	4, 3, 3, 3, ...
54	4		**14**	**13**	**10**	**6**	3, 3, 3, ...
56	4		**14**	**13**	**10**	**6**	4, 3, 3, ...
58	5	**33**	**12.5**	**12.5**	**6.5**	**6.5**	3, 3, ...
60	4		**14**	**13**	**10**	**6**	3, 3, 3, ...
62	5	**17**	**16**	**13**	**9**	**7**	3, 3, ...
64	4		**14**	**14**	**10.5**	**10.5**	3, 3, 3, ...
66	4		**18**	**15**	**13**	**9**	3, 3, 3, ...
68	4		**19**	**14**	**13**	**10**	3, 3, 3, ...
70	4		**19**	**19**	**12.5**	**12.5**	3, 3, 3, ...
72	3			**19**	**15**	**12**	3, 3, 3, 3, ...
74	4		**22**	**19**	**15**	**13**	3, 3, 3, ...
76	3			**40**	**15.5**	**15.5**	3, 3, 3, 3, ...
78	3			**22**	**19**	**15**	3, 3, 3, 3, ...
80	3			**22**	**18**	**16**	3, 3, 3, 3, ...
82	3			**61**	**19.5**	**19.5**	3, 3, 3, 3, ...
84	2				**22**	**18**	3, 3, 3, 3, 3, ...
86	3			**24**	**22**	**19**	3, 3, 3, 3, ...
88	2				**22**	**22**	3, 3, 3, 3, 3, ...
90	2				**25**	**21**	3, 3, 3, 3, 3, ...
92	2				**25**	**23**	3, 3, 3, 3, 3, ...
94	2				**25.5**	**25.5**	3, 3, 3, 3, 3, ...
96	1					**25**	4, 3, 3, 3, 3, 3, ...
98	2				**28**	**26**	4, 3, 3, 3, 3, ...
100	1					**55**	4, 4, 3, 3, 3, 3, ...
102	1					**28**	4, 4, 3, 3, 3, 3, ...
104	1					**29**	4, 4, 4, 3, 3, 3, ...
106	1					**59**	4, 4, 4, 3, 3, 3, ...
108	0						4, 4, 4, 4, 3, 3, 3, ...
110	1					**31**	4, 4, 4, 4, 3, 3, ...
112	0						4, 4, 4, 4, 4, 3, 3, ...
114	0						4, 4, 4, 4, 3, 3, 3, ...
116	0						4, 4, 4, 4, 4, 3, 3, ...
118	0						4, 4, 4, 4, 3, 3, 3, ...
120	0						4, 4, 4, 4, 3, 3, 3, ...

TABLE 1.10. Coefficient $i = 10$ for $p = 3$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros					
36	0						4, 4, 4, 3, 3, 3, 3, ...
38	0						4, 4, 4, 3, 3, 3, 3, ...
40	0						4, 4, 4, 3, 3, 3, 3, ...
42	0						4, 4, 3, 3, 3, 3, 3, ...
44	0						4, 4, 4, 3, 3, 3, 3, ...
46	1					**25**	4, 4, 3, 3, 3, 3, ...
48	1					**12**	4, 4, 3, 3, 3, 3, ...
50	2				**14**	**12**	4, 4, 3, 3, 3, ...
52	2				**12**	**12**	4, 4, 3, 3, 3, ...
54	3			**13**	**13**	**10**	4, 3, 3, 3, ...
56	3			**13**	**13**	**10**	4, 4, 3, 3, ...
58	4		**14.5**	**14.5**	**10**	**10**	4, 3, 3, ...
60	4		**14**	**13**	**10**	**6**	4, 3, 3, ...
62	5	**17**	**16**	**13**	**9**	**7**	4, 3, ...
64	5	**34**	**12.5**	**12.5**	**5.5**	**5.5**	4, 3, ...
66	5	**17**	**16**	**13**	**9**	**7**	3, 3, ...
68	5	**18**	**15**	**13**	**10**	**5**	4, 3, ...
70	5	**39**	**15**	**15**	**10**	**10**	3, 3, ...
72	4		**19**	**14**	**13**	**10**	3, 3, 3, ...
74	5	**22**	**19**	**14**	**14**	**10**	3, 3, ...
76	4		**19**	**19**	**12.5**	**12.5**	3, 3, 3, ...
78	4		**22**	**19**	**15**	**13**	3, 3, 3, ...
80	4		**22**	**18**	**16**	**13**	3, 3, 3, ...
82	4		**21.5**	**21.5**	**15**	**15**	3, 3, 3, ...
84	3			**22**	**18**	**16**	3, 3, 3, 3, ...
86	4		**25**	**22**	**19**	**15**	3, 3, 3, ...
88	3			**67**	**19**	**19**	3, 3, 3, 3, ...
90	3			**24**	**22**	**19**	3, 3, 3, 3, ...
92	3			**24**	**24**	**19**	3, 3, 3, 3, ...
94	3			**54**	**22**	**22**	3, 3, 3, 3, ...
96	2				**25**	**23**	3, 3, 3, 3, 3, ...
98	3			**28**	**26**	**23**	3, 3, 3, 3, ...
100	2				**25**	**25**	4, 3, 3, 3, 3, ...
102	2				**28**	**26**	4, 3, 3, 3, 3, ...
104	2				**29**	**25**	4, 4, 3, 3, 3, ...
106	2				**29.5**	**29.5**	4, 4, 3, 3, 3, ...
108	1					**29**	4, 4, 4, 3, 3, 3, ...
110	2				**33**	**29**	4, 4, 4, 3, 3, ...
112	1					**59**	4, 4, 4, 4, 3, 3, ...
114	1					**31**	4, 4, 4, 4, 3, 3, ...
116	1					**31**	4, 4, 4, 4, 4, 3, ...
118	1					**61**	4, 4, 4, 4, 4, 3, ...
120	0						4, 4, 4, 4, 4, 3, 3, ...
122	1					**32**	4, 4, 4, 4, 4, 3, ...
124	0						4, 4, 4, 4, 4, 3, 3, ...
126	0						4, 4, 4, 4, 3, 3, 3, ...
128	0						4, 4, 4, 4, 4, 3, 3, ...
130	0						4, 4, 4, 4, 3, 3, 3, ...
132	0						4, 4, 4, 4, 3, 3, 3, ...

TABLE 1.11. Coefficient $i = 11$ for $p = 3$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros						
40	0							4, 4, 4, 4, 3, 3, 3, 3, ...
42	0							4, 4, 4, 3, 3, 3, 3, 3, ...
44	0							4, 4, 4, 4, 3, 3, 3, 3, ...
46	0							4, 4, 4, 3, 3, 3, 3, 3, ...
48	0							4, 4, 4, 3, 3, 3, 3, 3, ...
50	1						**14**	4, 4, 4, 3, 3, 3, 3, ...
52	1						**26**	4, 4, 4, 3, 3, 3, 3, ...
54	2					**14**	**12**	4, 4, 3, 3, 3, 3, ...
56	2					**14**	**12**	4, 4, 4, 3, 3, 3, ...
58	3				**34**	**12**	**12**	4, 4, 3, 3, 3, ...
60	3				**13**	**13**	**10**	4, 4, 3, 3, 3, ...
62	4			**18**	**15**	**13**	**9**	4, 4, 3, 3, ...
64	4			**14**	**14**	**10.5**	**10.5**	4, 4, 3, 3, ...
66	5		**17**	**16**	**13**	**9**	**7**	4, 3, 3, ...
68	5		**18**	**15**	**13**	**10**	**5**	4, 4, 3, ...
70	6	**18**	**18**	**13**	**13**	**6**	**6**	4, 3, ...
72	5		**18**	**15**	**13**	**10**	**5**	4, 3, 3, ...
74	6	**21**	**18**	**15**	**14**	**10**	**5**	4, 3, ...
76	5		**39**	**15**	**15**	**9.5**	**9.5**	4, 3, 3, ...
78	5		**22**	**19**	**14**	**14**	**10**	3, 3, 3, ...
80	5		**22**	**18**	**15**	**14**	**8**	4, 3, 3, ...
82	5		**44**	**19.5**	**19.5**	**13**	**13**	3, 3, 3, ...
84	4			**22**	**18**	**16**	**13**	3, 3, 3, 3, ...
86	5		**25**	**22**	**19**	**15**	**13**	3, 3, 3, ...
88	4			**22.5**	**22.5**	**15.5**	**15.5**	3, 3, 3, 3, ...
90	4			**25**	**22**	**19**	**15**	3, 3, 3, 3, ...
92	4			**25**	**24**	**19**	**15**	3, 3, 3, 3, ...
94	4			**25**	**25**	**19**	**19**	3, 3, 3, 3, ...
96	3				**24**	**24**	**19**	3, 3, 3, 3, 3, ...
98	4			**28**	**25**	**24**	**18**	3, 3, 3, 3, ...
100	3				**55**	**23**	**23**	3, 3, 3, 3, 3, ...
102	3				**28**	**26**	**23**	3, 3, 3, 3, 3, ...
104	3				**29**	**25**	**23**	4, 3, 3, 3, 3, ...
106	3				**60**	**25.5**	**25.5**	4, 3, 3, 3, 3, ...
108	2					**29**	**25**	4, 4, 3, 3, 3, 3, ...
110	3				**33**	**29**	**25**	4, 4, 3, 3, 3, ...
112	2					**29.5**	**29.5**	4, 4, 4, 3, 3, 3, ...
114	2					**33**	**29**	4, 4, 4, 3, 3, 3, ...
116	2					**33**	**28**	4, 4, 4, 4, 3, 3, ...
118	2					**31**	**31**	4, 4, 4, 4, 3, 3, ...
120	1						**31**	4, 4, 4, 4, 4, 3, 3, ...
122	2					**32**	**31**	4, 4, 4, 4, 4, 3, ...
124	1						**62**	4, 4, 4, 4, 4, 4, 3, ...
126	1						**32**	4, 4, 4, 4, 4, 3, 3, ...
128	1						**32**	4, 4, 4, 4, 4, 4, 3, ...
130	1						**68**	4, 4, 4, 4, 4, 3, 3, ...
132	0							4, 4, 4, 4, 4, 3, 3, 3, ...
134	1						**35**	4, 4, 4, 4, 4, 3, 3, ...
136	0							4, 4, 4, 4, 4, 3, 3, 3, ...
138	0							4, 4, 4, 4, 3, 3, 3, 3, ...
140	0							4, 4, 4, 4, 4, 3, 3, 3, ...
142	0							4, 4, 4, 4, 3, 3, 3, 3, ...
144	0							4, 4, 4, 4, 3, 3, 3, 3, ...

TABLE 1.12. Coefficient $i = 12$ for $p = 3$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros						
44	0							4, 4, 4, 4, 4, 3, 3, 3, ...
46	0							4, 4, 4, 4, 3, 3, 3, 3, ...
48	0							4, 4, 4, 4, 3, 3, 3, 3, ...
50	0							4, 4, 4, 4, 3, 3, 3, 3, ...
52	0							4, 4, 4, 4, 3, 3, 3, 3, ...
54	1						**14**	4, 4, 4, 3, 3, 3, 3, ...
56	1						**14**	4, 4, 4, 4, 3, 3, 3, ...
58	2					**15**	**15**	4, 4, 4, 3, 3, 3, ...
60	2					**14**	**12**	4, 4, 4, 3, 3, 3, ...
62	3				**18**	**16**	**12**	4, 4, 4, 3, 3, ...
64	3				**35**	**12**	**12**	4, 4, 4, 3, 3, ...
66	4			**18**	**15**	**13**	**9**	4, 4, 3, 3, ...
68	4			**19**	**14**	**13**	**10**	4, 4, 4, 3, ...
70	5		**41**	**15**	**15**	**10**	**10**	4, 4, 3, ...
72	5		**18**	**15**	**13**	**10**	**5**	4, 4, 3, ...
74	6	**21**	**18**	**15**	**14**	**10**	**5**	4, 4, ...
76	6	**18**	**18**	**13**	**13**	**5.5**	**5.5**	4, 4, ...
78	6	**21**	**18**	**15**	**14**	**10**	**5**	4, 3, ...
80	6	**21**	**17**	**16**	**14**	**8**	**6**	4, 4, ...
82	6	**21**	**21**	**14.5**	**14.5**	**10.5**	**10.5**	4, 3, ...
84	5		**22**	**18**	**15**	**14**	**8**	4, 3, 3, ...
86	6	**24**	**22**	**19**	**14**	**14**	**10**	4, 3, ...
88	5		**47**	**19**	**19**	**12.5**	**12.5**	4, 3, 3, ...
90	5		**25**	**22**	**19**	**15**	**13**	3, 3, 3, ...
92	5		**25**	**24**	**19**	**15**	**12**	4, 3, 3, ...
94	5		**53**	**22.5**	**22.5**	**15.5**	**15.5**	3, 3, 3, ...
96	4			**25**	**24**	**19**	**15**	3, 3, 3, 3, ...
98	5		**27**	**26**	**24**	**18**	**16**	3, 3, 3, ...
100	4			**24.5**	**24.5**	**20.5**	**20.5**	3, 3, 3, 3, ...
102	4			**28**	**25**	**24**	**18**	3, 3, 3, 3, ...
104	4			**29**	**24**	**24**	**21**	3, 3, 3, 3, ...
106	4			**29.5**	**29.5**	**23**	**23**	3, 3, 3, 3, ...
108	3				**29**	**25**	**23**	4, 3, 3, 3, 3, ...
110	4			**33**	**29**	**25**	**23**	4, 3, 3, 3, ...
112	3				**60**	**25.5**	**25.5**	4, 4, 3, 3, 3, ...
114	3				**33**	**29**	**25**	4, 4, 3, 3, 3, ...
116	3				**33**	**28**	**26**	4, 4, 4, 3, 3, ...
118	3				**60**	**30.5**	**30.5**	4, 4, 4, 3, 3, ...
120	2					**33**	**28**	4, 4, 4, 4, 3, 3, ...
122	3				**31.5**	**31.5**	**30**	4, 4, 4, 4, 3, ...
124	2					**31**	**31**	4, 4, 4, 4, 4, 3, ...
126	2					**32**	**31**	4, 4, 4, 4, 4, 3, ...
128	2					**32**	**31**	4, 4, 4, 4, 4, 4, ...
130	2					**32.5**	**32.5**	4, 4, 4, 4, 4, 4, ...
132	1						**32**	4, 4, 4, 4, 4, 4, 3, ...
134	2					**35**	**33**	4, 4, 4, 4, 4, 4, ...
136	1						**70**	4, 4, 4, 4, 4, 4, 3, ...
138	1						**35**	4, 4, 4, 4, 4, 3, 3, ...
140	1						**37**	4, 4, 4, 4, 4, 4, 3, ...
142	1						**77**	4, 4, 4, 4, 4, 3, 3, ...
144	0							4, 4, 4, 4, 4, 3, 3, 3, ...
146	1						**39**	4, 4, 4, 4, 4, 3, 3, ...
148	0							4, 4, 4, 4, 4, 3, 3, 3, ...
150	0							4, 4, 4, 4, 3, 3, 3, 3, ...
152	0							4, 4, 4, 4, 4, 3, 3, 3, ...
154	0							4, 4, 4, 4, 3, 3, 3, 3, ...
156	0							4, 4, 4, 4, 3, 3, 3, 3, ...