

ACCURACY OF GHOST SERIES ($p = 2$ 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 15 coefficients of the ghost series for $p = 2$ and level $N = 1$. The tables take the form:

TABLE 0.1. Sample (separated) table

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

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 $\text{tr}(\wedge^i U_p)(\kappa) = 0$. 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.

Date: July 15, 2017.

2000 Mathematics Subject Classification. 11F33 (11F85).

1. THE TABLES

TABLE 1.1. Coefficient $i = 1$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros
4	0	3, 0, 0, ...
6	0	5, 0, 0, ...
8	0	3, 0, 0, ...
10	0	4, 0, 0, ...
12	0	3, 0, 0, ...
14	1	<u>13</u> 0, 0, ...
16	0	3, 0, 0, ...
18	0	4, 0, 0, ...
20	0	3, 0, 0, ...
22	0	5, 0, 0, ...
24	0	3, 0, 0, ...

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

k	pred. mult.	rel. pos. true zeros
10	0	6, 4, 3, ...
12	0	5, 3, 3, ...
14	0	5, 4, 3, ...
16	0	4, 3, 3, ...
18	0	5, 4, 3, ...
20	1	<u>12</u> 3, 3, ...
22	1	<u>13</u> 4, 3, ...
24	0	4, 3, 3, ...
26	1	<u>9</u> 4, 3, ...
28	0	5, 3, 3, ...
30	0	5, 4, 3, ...
32	0	4, 3, 3, ...
34	0	5, 4, 3, ...
36	0	6, 3, 3, ...

TABLE 1.3. Coefficient $i = 3$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros
16	0	6, 4, 3, ...
18	0	6, 5, 4, ...
20	0	5, 4, 3, ...
22	0	6, 5, 4, ...
24	0	5, 4, 3, ...
26	1	<u>9</u> 5, 4, ...
28	1	<u>13</u> 4, 3, ...
30	1	<u>15</u> 5, 4, ...
32	1	<u>9</u> 4, 3, ...
34	1	<u>9</u> 5, 4, ...
36	0	5, 4, 3, ...
38	1	<u>31</u> 5, 4, ...
40	0	5, 4, 3, ...
42	0	6, 5, 4, ...
44	0	6, 4, 3, ...
46	0	6, 5, 4, ...
48	0	6, 4, 3, ...

TABLE 1.4. Coefficient $i = 4$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros
22	0	6, 6, 5, 4, ...
24	0	6, 5, 4, 4, ...
26	0	6, 5, 5, 4, ...
28	0	6, 5, 4, 4, ...
30	0	6, 5, 5, 4, ...
32	1	<u>9</u> 5, 4, 4, ...
34	1	<u>9</u> 6, 5, 4, ...
36	1	<u>15</u> 5, 4, 4, ...
38	2	<u>10.5</u> <u>10.5</u> 5, 4, ...
40	1	<u>9</u> 5, 4, 4, ...
42	1	<u>11</u> 5, 5, 4, ...
44	1	<u>34</u> 5, 4, 4, ...
46	1	<u>36</u> 5, 5, 4, ...
48	0	6, 5, 4, 4, ...
50	1	<u>14</u> 6, 5, 4, ...
52	0	6, 5, 4, 4, ...
54	0	6, 6, 5, 4, ...
56	0	6, 5, 4, 4, ...
58	0	6, 5, 5, 4, ...
60	0	6, 5, 4, 4, ...

TABLE 1.5. Coefficient $i = 5$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos.		true zeros
28	0			6, 6, 5, 4, ...
30	0			7, 6, 6, 5, ...
32	0			6, 5, 5, 4, ...
34	0			6, 6, 5, 5, ...
36	0			6, 5, 5, 4, ...
38	1		<u>22</u>	6, 5, 5, ...
40	1		<u>9</u>	6, 5, 4, ...
42	1		<u>11</u>	6, 5, 5, ...
44	2	<u>10.5</u>	<u>10.5</u>	5, 4, ...
46	2	<u>10</u>	<u>10</u>	6, 5, ...
48	1		<u>11</u>	5, 5, 4, ...
50	2	<u>15</u>	<u>11</u>	5, 5, ...
52	1		<u>39</u>	5, 5, 4, ...
54	1		<u>39</u>	6, 5, 5, ...
56	1		<u>14</u>	6, 5, 4, ...
58	1		<u>14</u>	6, 5, 5, ...
60	0			6, 6, 5, 4, ...
62	1		<u>30</u>	6, 6, 5, ...
64	0			6, 5, 5, 4, ...
66	0			6, 6, 5, 5, ...
68	0			6, 5, 5, 4, ...
70	0			7, 6, 5, 5, ...
72	0			7, 6, 5, 4, ...

TABLE 1.6. Coefficient $i = 6$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros
34	0	7, 6, 6, 5, ...
36	0	7, 6, 6, 5, ...
38	0	7, 6, 6, 5, ...
40	0	6, 6, 5, 5, ...
42	0	7, 6, 6, 5, ...
44	1	<u>22</u> 6, 5, 5, ...
46	1	<u>22</u> 6, 6, 5, ...
48	1	<u>11</u> 6, 5, 5, ...
50	2	<u>15</u> <u>11</u> 6, 5, ...
52	2	<u>10</u> <u>10</u> 6, 5, ...
54	2	<u>11</u> <u>11</u> 6, 5, ...
56	2	<u>15</u> <u>11</u> 5, 5, ...
58	2	<u>15</u> <u>10</u> 6, 5, ...
60	1	<u>42</u> 6, 5, 5, ...
62	2	<u>14</u> <u>14</u> 6, 5, ...
64	1	<u>14</u> 6, 5, 5, ...
66	1	<u>14</u> 6, 6, 5, ...
68	1	<u>30</u> 6, 6, 5, ...
70	1	<u>33</u> 6, 6, 5, ...
72	0	6, 6, 5, 5, ...
74	1	<u>19</u> 6, 6, 5, ...
76	0	7, 6, 5, 5, ...
78	0	7, 6, 6, 5, ...
80	0	7, 6, 5, 5, ...
82	0	7, 7, 6, 5, ...
84	0	7, 7, 6, 5, ...

TABLE 1.7. Coefficient $i = 7$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros			
40	0			7, 6, 6, 5, 5, ...	
42	0			7, 7, 6, 6, 5, ...	
44	0			7, 6, 6, 5, 5, ...	
46	0			7, 6, 6, 6, 5, ...	
48	0			7, 6, 6, 5, 5, ...	
50	1		<u>14</u>	7, 6, 6, 5, ...	
52	1		<u>22</u>	6, 6, 5, 5, ...	
54	1		<u>22</u>	7, 6, 6, 5, ...	
56	2	<u>15</u>	<u>11</u>	6, 5, 5, ...	
58	2	<u>15</u>	<u>10</u>	6, 6, 5, ...	
60	2	<u>11</u>	<u>11</u>	6, 5, 5, ...	
62	3	<u>29</u>	<u>11.5</u>	<u>11.5</u>	6, 5, ...
64	2	<u>15</u>	<u>10</u>		6, 5, 5, ...
66	2	<u>15</u>	<u>10</u>		6, 6, 5, ...
68	2	<u>14</u>	<u>14</u>		6, 5, 5, ...
70	2	<u>15</u>	<u>15</u>		6, 6, 5, ...
72	1		<u>14</u>		6, 6, 5, 5, ...
74	2	<u>19</u>	<u>14</u>		6, 6, 5, ...
76	1		<u>33</u>		6, 6, 5, 5, ...
78	1		<u>34</u>		6, 6, 6, 5, ...
80	1		<u>19</u>		6, 6, 5, 5, ...
82	1		<u>19</u>		7, 6, 6, 5, ...
84	0				7, 6, 6, 5, 5, ...
86	1		<u>40</u>		7, 6, 6, 5, ...
88	0				7, 7, 6, 5, 5, ...
90	0				7, 7, 6, 6, 5, ...
92	0				7, 7, 6, 5, 5, ...
94	0				7, 7, 7, 6, 5, ...
96	0				7, 7, 6, 5, 5, ...

TABLE 1.8. Coefficient $i = 8$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros			
46	0			7, 7, 6, 6, 6, ...	
48	0			7, 7, 6, 6, 5, ...	
50	0			7, 7, 6, 6, 6, ...	
52	0			7, 6, 6, 6, 5, ...	
54	0			7, 7, 6, 6, 6, ...	
56	1		<u>14</u>	7, 6, 6, 5, ...	
58	1		<u>14</u>	7, 6, 6, 6, ...	
60	1		<u>22</u>	7, 6, 6, 5, ...	
62	2	<u>14</u>	<u>14</u>	7, 6, 6, ...	
64	2	<u>15</u>	<u>10</u>	6, 6, 5, ...	
66	2	<u>15</u>	<u>10</u>	7, 6, 6, ...	
68	3	<u>29</u>	<u>11.5</u>	<u>11.5</u>	6, 5, ...
70	3	<u>32</u>	<u>11</u>	<u>11</u>	6, 6, ...
72	2		<u>15</u>	<u>10</u>	6, 6, 5, ...
74	3	<u>18</u>	<u>15</u>	<u>11</u>	6, 6, ...
76	2		<u>15</u>	<u>15</u>	6, 6, 5, ...
78	2		<u>15</u>	<u>15</u>	6, 6, 6, ...
80	2		<u>19</u>	<u>14</u>	6, 6, 5, ...
82	2		<u>19</u>	<u>16</u>	6, 6, 6, ...
84	1			<u>34</u>	6, 6, 6, 5, ...
86	2	<u>20.5</u>	<u>20.5</u>		6, 6, 6, ...
88	1			<u>19</u>	7, 6, 6, 5, ...
90	1			<u>20</u>	7, 6, 6, 6, ...
92	1			<u>40</u>	7, 6, 6, 5, ...
94	1			<u>40</u>	7, 7, 6, 6, ...
96	0				7, 7, 6, 6, 5, ...
98	1			<u>23</u>	7, 7, 6, 6, ...
100	0				7, 7, 7, 6, 5, ...
102	0				7, 7, 7, 6, 6, ...
104	0				7, 7, 6, 6, 5, ...
106	0				7, 7, 7, 6, 6, ...
108	0				7, 7, 6, 6, 5, ...

TABLE 1.9. Coefficient $i = 9$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros	
52	0		7, 7, 6, 6, 6, ...
54	0		7, 7, 7, 6, 6, ...
56	0		7, 7, 6, 6, 6, ...
58	0		7, 7, 6, 6, 6, ...
60	0		7, 7, 6, 6, 6, ...
62	1		30 7, 7, 6, 6, ...
64	1		14 7, 6, 6, 6, ...
66	1		14 7, 7, 6, 6, ...
68	2	14	14 7, 6, 6, ...
70	2	15	15 7, 6, 6, ...
72	2	15	10 7, 6, 6, ...
74	3	18	15 11 7, 6, ...
76	3	32	11 11 6, 6, ...
78	3	33	10 10 7, 6, ...
80	3	18	15 11 6, 6, ...
82	3	18	17 11 6, 6, ...
84	2		15 15 6, 6, 6, ...
86	3	40	15 15 6, 6, ...
88	2		19 16 6, 6, 6, ...
90	2		20 16 6, 6, 6, ...
92	2	20.5	20.5 6, 6, 6, ...
94	2	20	20 7, 6, 6, ...
96	1		20 7, 6, 6, 6, ...
98	2	25	20 7, 6, 6, ...
100	1		40 7, 7, 6, 6, ...
102	1		40 7, 7, 6, 6, ...
104	1		23 7, 7, 6, 6, ...
106	1		23 7, 7, 7, 6, ...
108	0		7, 7, 7, 6, 6, ...
110	1		44 7, 7, 7, 6, ...
112	0		7, 7, 7, 6, 6, ...
114	0		7, 7, 7, 6, 6, ...
116	0		7, 7, 6, 6, 6, ...
118	0		7, 7, 7, 6, 6, ...
120	0		7, 7, 6, 6, 6, ...

TABLE 1.10. Coefficient $i = 10$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros				
58	0				8, 7, 7, 7, 6, 6, ...	
60	0				7, 7, 7, 6, 6, 6, ...	
62	0				7, 7, 7, 6, 6, 6, ...	
64	0				7, 7, 6, 6, 6, 6, ...	
66	0				7, 7, 7, 6, 6, 6, ...	
68	1			<u>30</u>	7, 7, 6, 6, 6, ...	
70	1			<u>33</u>	7, 7, 6, 6, 6, ...	
72	1			<u>14</u>	7, 7, 6, 6, 6, ...	
74	2		<u>19</u>	<u>14</u>	7, 7, 6, 6, ...	
76	2		<u>15</u>	<u>15</u>	7, 6, 6, 6, ...	
78	2		<u>15</u>	<u>15</u>	7, 7, 6, 6, ...	
80	3	<u>18</u>	<u>15</u>	<u>11</u>	7, 6, 6, ...	
82	3	<u>18</u>	<u>17</u>	<u>11</u>	7, 6, 6, ...	
84	3	<u>33</u>	<u>10</u>	<u>10</u>	7, 6, 6, ...	
86	4	<u>19.5</u>	<u>19.5</u>	<u>10.5</u>	<u>10.5</u>	7, 6, ...
88	3		<u>18</u>	<u>17</u>	<u>11</u>	6, 6, 6, ...
90	3		<u>19</u>	<u>17</u>	<u>9</u>	7, 6, 6, ...
92	3		<u>40</u>	<u>15</u>	<u>15</u>	6, 6, 6, ...
94	3		<u>40</u>	<u>16</u>	<u>16</u>	6, 6, 6, ...
96	2			<u>20</u>	<u>16</u>	6, 6, 6, 6, ...
98	3		<u>25</u>	<u>20</u>	<u>16</u>	6, 6, 6, ...
100	2			<u>20</u>	<u>20</u>	7, 6, 6, 6, ...
102	2			<u>20.5</u>	<u>20.5</u>	7, 6, 6, 6, ...
104	2			<u>25</u>	<u>20</u>	7, 6, 6, 6, ...
106	2			<u>25</u>	<u>19</u>	7, 7, 6, 6, ...
108	1				<u>40</u>	7, 7, 6, 6, 6, ...
110	2			<u>23</u>	<u>23</u>	7, 7, 6, 6, ...
112	1				<u>23</u>	7, 7, 7, 6, 6, ...
114	1				<u>23</u>	7, 7, 7, 6, 6, ...
116	1				<u>44</u>	7, 7, 7, 6, 6, ...
118	1				<u>45</u>	7, 7, 7, 7, 6, ...
120	0					7, 7, 7, 6, 6, 6, ...
122	1				<u>25</u>	7, 7, 7, 6, 6, ...
124	0					7, 7, 7, 6, 6, 6, ...
126	0					7, 7, 7, 6, 6, 6, ...
128	0					7, 7, 6, 6, 6, 6, ...
130	0					7, 7, 7, 6, 6, 6, ...
132	0					8, 7, 7, 6, 6, 6, ...

TABLE 1.11. Coefficient $i = 11$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros				
64	0				8, 7, 7, 7, 6, 6, ...	
66	0				8, 7, 7, 7, 7, 6, ...	
68	0				7, 7, 7, 6, 6, 6, ...	
70	0				8, 7, 7, 7, 6, 6, ...	
72	0				7, 7, 7, 6, 6, 6, ...	
74	1			<u>19</u>	7, 7, 7, 6, 6, ...	
76	1			<u>33</u>	7, 7, 6, 6, 6, ...	
78	1			<u>34</u>	7, 7, 7, 6, 6, ...	
80	2		<u>19</u>	<u>14</u>	7, 7, 6, 6, ...	
82	2		<u>19</u>	<u>16</u>	7, 7, 6, 6, ...	
84	2		<u>15</u>	<u>15</u>	7, 7, 6, 6, ...	
86	3	<u>42</u>	<u>15</u>	<u>15</u>	7, 7, 6, ...	
88	3	<u>18</u>	<u>17</u>	<u>11</u>	7, 6, 6, ...	
90	3	<u>19</u>	<u>17</u>	<u>9</u>	7, 7, 6, ...	
92	4	<u>19.5</u>	<u>19.5</u>	<u>10.5</u>	<u>10.5</u>	7, 6, ...
94	4	<u>19</u>	<u>19</u>	<u>12</u>	<u>12</u>	7, 6, ...
96	3		<u>19</u>	<u>17</u>	<u>9</u>	7, 6, 6, ...
98	4	<u>24</u>	<u>19</u>	<u>17</u>	<u>9</u>	7, 6, ...
100	3		<u>40</u>	<u>16</u>	<u>16</u>	6, 6, 6, ...
102	3		<u>40</u>	<u>15.5</u>	<u>15.5</u>	7, 6, 6, ...
104	3		<u>25</u>	<u>20</u>	<u>16</u>	6, 6, 6, ...
106	3		<u>25</u>	<u>19</u>	<u>16</u>	7, 6, 6, ...
108	2			<u>20.5</u>	<u>20.5</u>	7, 6, 6, 6, ...
110	3		<u>75</u>	<u>21.5</u>	<u>21.5</u>	7, 6, 6, ...
112	2			<u>25</u>	<u>19</u>	7, 7, 6, 6, ...
114	2			<u>25</u>	<u>19</u>	7, 7, 6, 6, ...
116	2			<u>23</u>	<u>23</u>	7, 7, 6, 6, ...
118	2			<u>23</u>	<u>23</u>	7, 7, 7, 6, ...
120	1				<u>23</u>	7, 7, 7, 6, 6, ...
122	2			<u>25</u>	<u>23</u>	7, 7, 7, 6, ...
124	1				<u>45</u>	7, 7, 7, 7, 6, ...
126	1				<u>49</u>	7, 7, 7, 7, 6, ...
128	1				<u>25</u>	7, 7, 7, 6, 6, ...
130	1				<u>25</u>	7, 7, 7, 7, 6, ...
132	0					7, 7, 7, 6, 6, 6, ...
134	1				<u>60</u>	7, 7, 7, 6, 6, ...
136	0					7, 7, 7, 6, 6, 6, ...
138	0					8, 7, 7, 7, 6, 6, ...
140	0					8, 7, 7, 6, 6, 6, ...
142	0					8, 7, 7, 7, 6, 6, ...
144	0					8, 8, 7, 7, 6, 6, ...

TABLE 1.12. Coefficient $i = 12$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros				
70	0				8, 8, 7, 7, 7, 7, ...	
72	0				8, 7, 7, 7, 7, 6, ...	
74	0				8, 7, 7, 7, 7, 6, ...	
76	0				8, 7, 7, 7, 6, 6, ...	
78	0				8, 7, 7, 7, 7, 6, ...	
80	1			<u>19</u>	7, 7, 7, 6, 6, ...	
82	1			<u>19</u>	8, 7, 7, 7, 6, ...	
84	1			<u>34</u>	7, 7, 7, 6, 6, ...	
86	2		<u>20.5</u>	<u>20.5</u>	7, 7, 7, 6, ...	
88	2		<u>19</u>	<u>16</u>	7, 7, 6, 6, ...	
90	2		<u>20</u>	<u>16</u>	7, 7, 7, 6, ...	
92	3		<u>42</u>	<u>15</u>	<u>15</u>	7, 7, 6, ...
94	3		<u>42</u>	<u>16</u>	<u>16</u>	7, 7, 6, ...
96	3		<u>19</u>	<u>17</u>	<u>9</u>	7, 7, 6, ...
98	4	<u>24</u>	<u>19</u>	<u>17</u>	<u>9</u>	7, 7, ...
100	4	<u>19</u>	<u>19</u>	<u>12</u>	<u>12</u>	7, 6, ...
102	4	<u>19.5</u>	<u>19.5</u>	<u>11</u>	<u>11</u>	7, 7, ...
104	4	<u>24</u>	<u>19</u>	<u>17</u>	<u>9</u>	7, 6, ...
106	4	<u>24</u>	<u>18</u>	<u>17</u>	<u>12</u>	7, 6, ...
108	3		<u>40</u>	<u>15.5</u>	<u>15.5</u>	7, 6, 6, ...
110	4	<u>23.5</u>	<u>23.5</u>	<u>15.5</u>	<u>15.5</u>	7, 6, ...
112	3		<u>25</u>	<u>19</u>	<u>16</u>	7, 6, 6, ...
114	3		<u>25</u>	<u>19</u>	<u>15</u>	7, 7, 6, ...
116	3		<u>78</u>	<u>21.5</u>	<u>21.5</u>	7, 6, 6, ...
118	3		<u>81</u>	<u>21</u>	<u>21</u>	7, 7, 6, ...
120	2			<u>25</u>	<u>19</u>	7, 7, 6, 6, ...
122	3		<u>24</u>	<u>24</u>	<u>21</u>	7, 7, 6, ...
124	2			<u>23</u>	<u>23</u>	7, 7, 7, 6, ...
126	2			<u>23</u>	<u>23</u>	7, 7, 7, 6, ...
128	2			<u>25</u>	<u>23</u>	7, 7, 7, 6, ...
130	2			<u>25</u>	<u>23</u>	7, 7, 7, 7, ...
132	1				<u>49</u>	7, 7, 7, 7, 6, ...
134	2			<u>27.5</u>	<u>27.5</u>	7, 7, 7, 7, ...
136	1				<u>25</u>	7, 7, 7, 7, 6, ...
138	1				<u>29</u>	7, 7, 7, 7, 6, ...
140	1				<u>60</u>	7, 7, 7, 6, 6, ...
142	1				<u>60</u>	7, 7, 7, 7, 6, ...
144	0					8, 7, 7, 7, 6, 6, ...
146	1				<u>32</u>	8, 7, 7, 7, 6, ...
148	0					8, 7, 7, 7, 6, 6, ...
150	0					8, 8, 7, 7, 7, 6, ...
152	0					8, 8, 7, 7, 6, 6, ...
154	0					8, 8, 7, 7, 7, 6, ...
156	0					8, 8, 8, 7, 7, 6, ...

TABLE 1.13. Coefficient $i = 13$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros					
76	0				8, 8, 7, 7, 7, 7, 6, ...		
78	0				8, 8, 7, 7, 7, 7, 7, ...		
80	0				8, 7, 7, 7, 7, 6, 6, ...		
82	0				8, 8, 7, 7, 7, 7, 6, ...		
84	0				8, 7, 7, 7, 7, 6, 6, ...		
86	1			<u>39</u>	8, 7, 7, 7, 7, 6, ...		
88	1			<u>19</u>	8, 7, 7, 7, 6, 6, ...		
90	1			<u>20</u>	8, 7, 7, 7, 7, 6, ...		
92	2		<u>20.5</u>	<u>20.5</u>	7, 7, 7, 6, 6, ...		
94	2		<u>20</u>	<u>20</u>	8, 7, 7, 7, 6, ...		
96	2		<u>20</u>	<u>16</u>	7, 7, 7, 6, 6, ...		
98	3		<u>25</u>	<u>20</u>	<u>16</u>	7, 7, 7, 6, ...	
100	3		<u>42</u>	<u>16</u>	<u>16</u>	7, 7, 6, 6, ...	
102	3		<u>42</u>	<u>15.5</u>	<u>15.5</u>	7, 7, 7, 6, ...	
104	4	<u>24</u>	<u>19</u>	<u>17</u>	<u>9</u>	7, 7, 6, ...	
106	4	<u>24</u>	<u>18</u>	<u>17</u>	<u>12</u>	7, 7, 6, ...	
108	4	<u>19.5</u>	<u>19.5</u>	<u>11</u>	<u>11</u>	7, 7, 6, ...	
110	5	<u>44</u>	<u>20.5</u>	<u>20.5</u>	<u>10.5</u>	<u>10.5</u>	7, 7, ...
112	4		<u>24</u>	<u>18</u>	<u>17</u>	<u>12</u>	7, 6, 6, ...
114	4		<u>24</u>	<u>18</u>	<u>16</u>	<u>12</u>	7, 7, 6, ...
116	4		<u>23.5</u>	<u>23.5</u>	<u>15.5</u>	<u>15.5</u>	7, 6, 6, ...
118	4		<u>23.5</u>	<u>23.5</u>	<u>15.5</u>	<u>15.5</u>	7, 7, 6, ...
120	3			<u>25</u>	<u>19</u>	<u>15</u>	7, 7, 6, 6, ...
122	4		<u>24.5</u>	<u>24.5</u>	<u>21</u>	<u>15</u>	7, 7, 6, ...
124	3			<u>84</u>	<u>21</u>	<u>21</u>	7, 7, 6, 6, ...
126	3			<u>84</u>	<u>20</u>	<u>20</u>	7, 7, 7, 6, ...
128	3			<u>24</u>	<u>24</u>	<u>21</u>	7, 7, 6, 6, ...
130	3			<u>24</u>	<u>24</u>	<u>21</u>	7, 7, 7, 6, ...
132	2				<u>23</u>	<u>23</u>	7, 7, 7, 6, 6, ...
134	3			<u>58</u>	<u>23</u>	<u>23</u>	7, 7, 7, 6, ...
136	2				<u>25</u>	<u>23</u>	7, 7, 7, 7, 6, ...
138	2				<u>29</u>	<u>23</u>	7, 7, 7, 7, 6, ...
140	2				<u>27.5</u>	<u>27.5</u>	7, 7, 7, 7, 6, ...
142	2				<u>27</u>	<u>27</u>	7, 7, 7, 7, 7, ...
144	1					<u>29</u>	7, 7, 7, 7, 6, 6, ...
146	2				<u>33</u>	<u>29</u>	7, 7, 7, 7, 6, ...
148	1					<u>60</u>	7, 7, 7, 7, 6, 6, ...
150	1					<u>60</u>	8, 7, 7, 7, 7, 6, ...
152	1					<u>32</u>	8, 7, 7, 7, 6, 6, ...
154	1					<u>32</u>	8, 7, 7, 7, 7, 6, ...
156	0						8, 8, 7, 7, 7, 6, 6, ...
158	1					<u>65</u>	8, 8, 7, 7, 7, 6, ...
160	0						8, 8, 7, 7, 7, 6, 6, ...
162	0						8, 8, 8, 7, 7, 7, 6, ...
164	0						8, 8, 8, 7, 7, 6, 6, ...
166	0						8, 8, 8, 7, 7, 7, 6, ...
168	0						8, 8, 8, 8, 7, 7, 6, ...

TABLE 1.14. Coefficient $i = 14$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros					
82	0				8, 8, 8, 7, 7, 7, 7, ...		
84	0				8, 8, 7, 7, 7, 7, 7, ...		
86	0				8, 8, 7, 7, 7, 7, 7, ...		
88	0				8, 8, 7, 7, 7, 7, 6, ...		
90	0				8, 8, 7, 7, 7, 7, 7, ...		
92	1			<u>39</u>	8, 7, 7, 7, 7, 6, ...		
94	1			<u>39</u>	8, 8, 7, 7, 7, 7, ...		
96	1			<u>20</u>	8, 7, 7, 7, 7, 6, ...		
98	2		<u>25</u>	<u>20</u>	8, 7, 7, 7, 7, ...		
100	2		<u>20</u>	<u>20</u>	8, 7, 7, 7, 6, ...		
102	2		<u>20.5</u>	<u>20.5</u>	8, 7, 7, 7, 7, ...		
104	3		<u>25</u>	<u>20</u>	<u>16</u>	7, 7, 7, 6, ...	
106	3		<u>25</u>	<u>19</u>	<u>16</u>	8, 7, 7, 7, ...	
108	3		<u>42</u>	<u>15.5</u>	<u>15.5</u>	7, 7, 7, 6, ...	
110	4	<u>23.5</u>	<u>23.5</u>	<u>15.5</u>	<u>15.5</u>	7, 7, 7, ...	
112	4		<u>24</u>	<u>18</u>	<u>17</u>	<u>12</u>	7, 7, 6, ...
114	4		<u>24</u>	<u>18</u>	<u>16</u>	<u>12</u>	7, 7, 7, ...
116	5	<u>44</u>	<u>20.5</u>	<u>20.5</u>	<u>10.5</u>	<u>10.5</u>	7, 7, ...
118	5	<u>45</u>	<u>20</u>	<u>20</u>	<u>12</u>	<u>12</u>	7, 7, ...
120	4		<u>24</u>	<u>18</u>	<u>16</u>	<u>12</u>	7, 7, 6, ...
122	5	<u>25</u>	<u>24</u>	<u>20</u>	<u>16</u>	<u>11</u>	7, 7, ...
124	4		<u>23.5</u>	<u>23.5</u>	<u>15.5</u>	<u>15.5</u>	7, 7, 6, ...
126	4		<u>23.5</u>	<u>23.5</u>	<u>15</u>	<u>15</u>	7, 7, 7, ...
128	4		<u>24.5</u>	<u>24.5</u>	<u>21</u>	<u>15</u>	7, 7, 6, ...
130	4		<u>24.5</u>	<u>24.5</u>	<u>21</u>	<u>15</u>	7, 7, 7, ...
132	3			<u>87</u>	<u>20</u>	<u>20</u>	7, 7, 7, 6, ...
134	4		<u>26</u>	<u>26</u>	<u>21</u>	<u>21</u>	7, 7, 7, ...
136	3			<u>24</u>	<u>24</u>	<u>21</u>	7, 7, 7, 6, ...
138	3			<u>27</u>	<u>25</u>	<u>19</u>	7, 7, 7, 7, ...
140	3			<u>58</u>	<u>23</u>	<u>23</u>	7, 7, 7, 6, ...
142	3			<u>58</u>	<u>23</u>	<u>23</u>	7, 7, 7, 7, ...
144	2				<u>29</u>	<u>23</u>	7, 7, 7, 7, 6, ...
146	3			<u>33</u>	<u>29</u>	<u>23</u>	7, 7, 7, 7, ...
148	2				<u>27</u>	<u>27</u>	7, 7, 7, 7, 7, ...
150	2				<u>29</u>	<u>29</u>	7, 7, 7, 7, 7, ...
152	2				<u>33</u>	<u>29</u>	7, 7, 7, 7, 6, ...
154	2				<u>33</u>	<u>28</u>	7, 7, 7, 7, 7, ...
156	1					<u>60</u>	8, 7, 7, 7, 7, 6, ...
158	2				<u>32</u>	<u>32</u>	8, 7, 7, 7, 7, ...
160	1					<u>32</u>	8, 7, 7, 7, 7, 6, ...
162	1					<u>32</u>	8, 8, 7, 7, 7, 7, ...
164	1					<u>65</u>	8, 8, 7, 7, 7, 6, ...
166	1					<u>67</u>	8, 8, 7, 7, 7, 7, ...
168	0						8, 8, 8, 7, 7, 7, 6, ...
170	1					<u>36</u>	8, 8, 8, 7, 7, 7, ...
172	0						8, 8, 8, 7, 7, 7, 6, ...
174	0						8, 8, 8, 8, 7, 7, 7, ...
176	0						8, 8, 8, 8, 7, 7, 6, ...
178	0						8, 8, 8, 8, 7, 7, 7, ...
180	0						8, 8, 8, 8, 8, 7, 7, ...

TABLE 1.15. Coefficient $i = 15$ for $p = 2$ and tame level $N = 1$

k	pred. mult.	rel. pos. true zeros					
88	0				8, 8, 8, 7, 7, 7, 7, ...		
90	0				8, 8, 8, 7, 7, 7, 7, ...		
92	0				8, 8, 7, 7, 7, 7, 7, ...		
94	0				8, 8, 8, 7, 7, 7, 7, ...		
96	0				8, 8, 7, 7, 7, 7, 7, ...		
98	1			<u>23</u>	8, 8, 7, 7, 7, 7, ...		
100	1			<u>39</u>	8, 8, 7, 7, 7, 7, ...		
102	1			<u>39</u>	8, 8, 7, 7, 7, 7, ...		
104	2		<u>25</u>	<u>20</u>	8, 7, 7, 7, 7, ...		
106	2		<u>25</u>	<u>19</u>	8, 8, 7, 7, 7, ...		
108	2		<u>20.5</u>	<u>20.5</u>	8, 7, 7, 7, 7, ...		
110	3	<u>42</u>	<u>21.5</u>	<u>21.5</u>	8, 7, 7, 7, ...		
112	3	<u>25</u>	<u>19</u>	<u>16</u>	8, 7, 7, 7, ...		
114	3	<u>25</u>	<u>19</u>	<u>15</u>	8, 7, 7, 7, ...		
116	4	<u>23.5</u>	<u>23.5</u>	<u>15.5</u>	<u>15.5</u>	7, 7, 7, ...	
118	4	<u>23.5</u>	<u>23.5</u>	<u>15.5</u>	<u>15.5</u>	8, 7, 7, ...	
120	4	<u>24</u>	<u>18</u>	<u>16</u>	<u>12</u>	7, 7, 7, ...	
122	5	<u>25</u>	<u>24</u>	<u>20</u>	<u>16</u>	<u>11</u>	7, 7, ...
124	5	<u>45</u>	<u>20</u>	<u>20</u>	<u>12</u>	<u>12</u>	7, 7, ...
126	5	<u>49</u>	<u>19</u>	<u>19</u>	<u>12.5</u>	<u>12.5</u>	7, 7, ...
128	5	<u>25</u>	<u>24</u>	<u>20</u>	<u>16</u>	<u>11</u>	7, 7, ...
130	5	<u>25</u>	<u>24</u>	<u>20</u>	<u>16</u>	<u>11</u>	7, 7, ...
132	4	<u>23.5</u>	<u>23.5</u>	<u>15</u>	<u>15</u>		7, 7, 7, ...
134	5	<u>58</u>	<u>23.5</u>	<u>23.5</u>	<u>15.5</u>	<u>15.5</u>	7, 7, ...
136	4	<u>24.5</u>	<u>24.5</u>	<u>21</u>	<u>15</u>		7, 7, 7, ...
138	4	<u>28</u>	<u>25</u>	<u>19</u>	<u>15</u>		7, 7, 7, ...
140	4	<u>26</u>	<u>26</u>	<u>21</u>	<u>21</u>		7, 7, 7, ...
142	4	<u>25.5</u>	<u>25.5</u>	<u>21.5</u>	<u>21.5</u>		7, 7, 7, ...
144	3		<u>27</u>	<u>25</u>	<u>19</u>		7, 7, 7, 7, ...
146	4	<u>32</u>	<u>27</u>	<u>25</u>	<u>19</u>		7, 7, 7, ...
148	3		<u>58</u>	<u>23</u>	<u>23</u>		7, 7, 7, 7, ...
150	3		<u>58</u>	<u>24</u>	<u>24</u>		7, 7, 7, 7, ...
152	3		<u>33</u>	<u>29</u>	<u>23</u>		7, 7, 7, 7, ...
154	3		<u>33</u>	<u>28</u>	<u>23</u>		7, 7, 7, 7, ...
156	2			<u>29</u>	<u>29</u>		7, 7, 7, 7, 7, ...
158	3		<u>64</u>	<u>29.5</u>	<u>29.5</u>		7, 7, 7, 7, ...
160	2			<u>33</u>	<u>28</u>		7, 7, 7, 7, 7, ...
162	2			<u>33</u>	<u>28</u>		8, 7, 7, 7, 7, ...
164	2			<u>32</u>	<u>32</u>		8, 7, 7, 7, 7, ...
166	2			<u>32.5</u>	<u>32.5</u>		8, 7, 7, 7, 7, ...
168	1				<u>32</u>		8, 8, 7, 7, 7, 7, ...
170	2			<u>36</u>	<u>32</u>		8, 8, 7, 7, 7, ...
172	1				<u>67</u>		8, 8, 7, 7, 7, 7, ...
174	1				<u>68</u>		8, 8, 8, 7, 7, 7, ...
176	1				<u>36</u>		8, 8, 8, 7, 7, 7, ...
178	1				<u>36</u>		8, 8, 8, 7, 7, 7, ...
180	0						8, 8, 8, 8, 7, 7, 7, ...
182	1					<u>73</u>	8, 8, 8, 8, 7, 7, ...
184	0						8, 8, 8, 8, 7, 7, 7, ...
186	0						8, 8, 8, 8, 8, 7, 7, ...
188	0						8, 8, 8, 8, 8, 7, 7, ...
190	0						8, 8, 8, 8, 8, 7, 7, ...
192	0						8, 8, 8, 8, 8, 7, 7, ...