

List of Tables

1	The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $3 \leq p \leq 97$ and $3 \leq \ell \leq 26$	1
2	The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $3 \leq p \leq 97$ and $27 \leq \ell \leq 50$	2
3	The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $3 \leq p \leq 97$ and $51 \leq \ell \leq 75$	3
4	The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $3 \leq p \leq 97$ and $76 \leq \ell \leq 100$	4
5	The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $101 \leq p \leq 199$ and $3 \leq \ell \leq 26$	5
6	The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $101 \leq p \leq 199$ and $27 \leq \ell \leq 50$	6
7	The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $101 \leq p \leq 199$ and $51 \leq \ell \leq 75$	7
8	The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $101 \leq p \leq 199$ and $76 \leq \ell \leq 100$	8
9	The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $211 \leq p \leq 331$ and $3 \leq \ell \leq 26$	9
10	The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $211 \leq p \leq 331$ and $27 \leq \ell \leq 50$	10
11	The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $211 \leq p \leq 331$ and $51 \leq \ell \leq 75$	11
12	The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $211 \leq p \leq 331$ and $76 \leq \ell \leq 100$	12

Table 1: The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $3 \leq p \leq 97$ and $3 \leq \ell \leq 26$.

$\ell \backslash p$	3	5	7	11	13	17	19	23	29	31	37	41	43	47	53	59	61	67	71	73	79	83	89	97
3	*	0	1	0	2	0	1	0	0	1	1	0	1	0	0	0	1	1	0	1	1	0	0	1
4	0	1	0	0	1	1	0	0	1	0	1	1	0	0	1	0	1	0	0	1	0	0	1	1
5	0	*	0	2	0	0	0	0	0	2	0	2	0	0	0	0	2	0	2	0	0	0	0	0
6	*	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	1
7	0	0	*	1	0	0	0	1	3	0	1	0	3	0	1	0	0	1	3	0	1	0	0	0
8	1	1	0	1	1	2	1	0	1	0	1	2	1	0	1	1	1	1	0	2	0	1	2	2
9	*	0	1	0	2	0	4	0	0	1	3	0	1	0	0	0	1	1	0	3	1	0	0	1
10	0	*	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0
11	1	10	0	*	0	0	0	5	0	1	1	0	0	1	1	1	0	5	1	0	0	0	5	1
12	*	1	0	0	2	0	0	0	1	0	2	0	0	0	1	0	2	0	0	2	0	0	0	2
13	6	0	0	0	*	0	0	0	2	0	0	0	0	0	6	0	2	0	0	0	6	0	0	0
14	6	2	*	0	1	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
15	*	*	0	0	0	1	1	1	0	4	0	0	0	1	1	0	4	0	0	0	1	1	0	0
16	1	1	2	1	1	4	1	2	1	0	1	2	1	0	1	1	1	1	2	2	0	1	2	5
17	0	0	0	0	0	*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	*	0	0	0	1	0	1	0	0	0	3	0	0	0	0	0	1	0	0	3	1	0	0	1
19	0	1	7	4	0	1	*	1	0	0	0	0	1	1	0	0	1	0	0	1	0	3	0	0
20	1	*	2	1	0	0	0	1	1	0	1	4	1	2	0	0	3	1	0	0	0	1	2	0
21	*	1	*	0	2	1	0	1	0	0	0	0	6	1	0	1	0	0	0	0	0	0	1	2
22	0	0	0	*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
23	1	0	0	0	1	0	0	*	1	1	0	1	0	11	0	1	0	0	1	1	0	0	0	0
24	*	3	1	1	2	0	0	0	2	1	2	0	0	0	2	1	2	0	0	3	1	1	0	4
25	0	*	0	2	0	0	0	0	0	2	0	2	0	0	0	0	2	0	2	0	0	0	0	0
26	6	0	0	0	*	1	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0

Table 2: The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $3 \leq p \leq 97$ and $27 \leq \ell \leq 50$.

$\ell \backslash p$	3	5	7	11	13	17	19	23	29	31	37	41	43	47	53	59	61	67	71	73	79	83	89	97
27	*	0	1	0	2	0	4	0	0	1	3	0	1	0	0	0	1	1	0	3	1	0	0	1
28	6	2	*	0	4	0	0	0	5	0	1	2	0	0	0	0	0	0	0	0	0	0	0	2
29	0	0	14	0	0	0	0	2	*	0	0	0	0	0	2	14	0	0	0	0	0	2	0	0
30	*	*	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0
31	3	5	1	0	0	0	1	0	0	*	0	1	0	3	0	1	0	5	1	0	0	0	0	3
32	1	1	2	1	1	4	1	2	1	0	1	2	1	4	1	1	1	1	2	2	4	1	2	9
33	*	0	0	*	1	0	0	0	0	0	0	1	4	0	0	0	0	10	0	0	1	0	0	0
34	0	0	0	0	0	*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
35	12	*	*	1	4	1	0	0	3	0	0	4	0	1	0	0	0	0	12	1	1	3	0	3
36	*	1	0	0	2	2	1	0	1	0	6	0	0	0	3	0	2	0	0	6	1	0	2	2
37	0	0	2	0	0	0	0	0	0	0	*	0	0	6	2	0	0	0	2	0	0	2	0	0
38	0	0	3	0	0	0	*	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
39	*	5	0	1	*	0	0	0	0	3	0	1	2	4	0	1	1	0	1	2	12	3	1	0
40	1	*	3	2	1	0	3	2	3	2	2	7	1	3	1	3	3	1	2	0	0	1	3	0
41	0	0	0	2	0	0	0	0	0	0	4	*	0	0	0	4	0	0	0	0	0	20	0	0
42	*	0	*	1	1	1	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
43	0	0	0	3	1	1	0	1	0	1	0	3	*	3	1	3	0	1	0	0	7	1	0	3
44	0	4	0	*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	10	0	0
45	*	*	0	0	0	3	3	1	0	4	0	0	0	1	3	0	4	0	4	0	1	1	0	0
46	0	0	0	0	0	0	0	*	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
47	2	1	1	0	0	2	0	0	0	0	1	0	0	*	1	1	1	0	1	0	1	1	1	1
48	*	5	1	1	2	2	0	2	2	3	2	2	0	0	2	1	2	0	2	3	3	1	2	8
49	0	0	*	1	0	0	0	1	3	0	1	0	4	0	1	0	0	7	3	0	7	0	0	0
50	0	*	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0

Table 3: The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $3 \leq p \leq 97$ and $51 \leq \ell \leq 75$.

$\ell \backslash p$	3	5	7	11	13	17	19	23	29	31	37	41	43	47	53	59	61	67	71	73	79	83	89	97
51	*	3	0	1	3	*	1	1	1	0	0	2	1	4	2	3	0	7	2	0	0	3	4	0
52	9	3	1	1	*	2	1	0	1	4	0	0	0	3	11	1	1	2	1	2	0	3	0	0
53	0	0	0	0	26	0	0	0	0	0	0	0	0	2	*	0	0	0	0	0	0	0	2	2
54	*	0	0	0	1	0	2	0	0	0	3	0	0	0	0	0	1	0	0	3	1	0	0	1
55	0	*	1	*	1	1	0	0	0	1	0	0	7	0	0	1	0	0	1	1	0	1	5	0
56	14	3	*	0	7	0	1	1	5	0	1	5	2	0	0	1	1	0	3	0	1	5	0	4
57	*	0	3	0	0	0	*	0	1	2	8	0	0	0	1	0	0	1	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	1	1	1	0	0	1	1	0	29	0	0	1	0	0	1	*	0	0	1	0	1	0	0	0
60	*	*	1	2	0	1	2	0	2	0	0	0	0	0	0	0	6	1	2	0	2	0	3	1
61	0	0	0	0	10	0	0	0	0	0	0	1	0	10	0	0	*	0	0	2	0	2	0	0
62	0	0	0	2	0	0	0	0	0	*	0	0	2	0	0	0	0	0	0	0	0	0	0	0
63	*	1	*	2	2	1	0	3	0	2	2	0	6	1	2	1	2	4	6	0	4	0	1	2
64	1	1	2	1	1	5	1	2	1	8	1	2	1	4	1	1	1	1	2	2	4	1	2	9
65	0	*	0	0	*	2	2	2	2	4	0	2	2	0	0	2	4	0	0	0	6	0	2	0
66	*	0	0	*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
67	0	0	0	0	0	1	1	1	<div>11</div>	0	11	0	0	1	0	<div>3</div>	0	*	1	1	0	1	3	0
68	1	0	1	2	3	*	2	1	0	1	0	0	2	4	1	2	0	0	1	0	1	2	3	1
69	*	0	0	0	0	2	0	*	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	0
70	9	*	*	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
71	1	35	7	0	0	0	1	0	2	0	5	0	1	0	0	0	0	0	*	1	1	1	1	0
72	*	3	1	1	2	4	3	0	2	1	6	0	0	0	6	1	2	0	0	11	2	1	4	4
73	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	*	0	0	4	0
74	0	1	0	0	0	0	2	0	0	0	*	0	0	0	0	0	0	0	0	0	0	0	0	0
75	*	*	4	1	0	1	1	1	0	4	0	1	4	1	1	0	4	0	0	0	1	1	0	0

Table 4: The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $3 \leq p \leq 97$ and $76 \leq \ell \leq 100$.

$\ell \backslash p$	3	5	7	11	13	17	19	23	29	31	37	41	43	47	53	59	61	67	71	73	79	83	89	97
76	1	0	4	0	0	0	*	0	0	1	9	1	0	0	0	0	0	0	0	0	0	1	0	0
77	3	4	*	*	0	1	2	4	0	0	0	0	12	0	0	1	0	4	2	0	0	0	1	2
78	*	0	0	1	*	0	0	0	0	1	0	0	1	0	1	1	1	0	0	0	0	0	1	1
79	0	1	0	1	13	0	1	13	0	1	0	0	0	0	1	0	0	3	0	1	*	1	3	3
80	3	*	3	2	3	0	3	2	3	6	4	7	3	5	3	3	3	3	4	2	0	3	7	0
81	*	0	1	0	2	0	4	0	0	1	3	0	1	0	0	0	1	1	0	3	1	0	0	1
82	0	0	0	0	0	0	0	0	0	0	0	*	0	0	0	0	0	0	0	0	0	0	0	0
83	1	0	1	1	0	2	0	1	1	1	1	82	0	0	0	1	1	0	0	0	0	*	0	0
84	*	1	*	3	3	2	1	2	3	2	1	3	1	0	0	0	0	0	3	0	0	0	1	1
85	6	*	2	0	0	*	4	2	2	0	2	0	4	0	4	4	0	8	0	3	2	4	8	2
86	0	1	0	0	0	0	0	0	0	0	0	0	*	0	0	0	0	0	0	0	0	0	0	0
87	*	1	13	2	1	7	0	1	*	0	1	7	0	1	0	0	1	1	0	0	1	1	1	0
88	0	8	0	*	2	0	1	7	2	1	0	0	9	1	0	0	1	4	1	1	0	1	19	1
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	*	4
90	*	*	3	0	0	1	0	0	0	1	0	0	0	0	0	0	4	1	0	1	0	0	0	0
91	15	6	*	2	*	0	4	5	7	5	3	3	3	3	5	3	4	2	0	3	5	9	3	3
92	0	1	0	0	1	0	0	*	1	0	1	1	0	0	1	0	1	1	0	0	0	0	0	0
93	*	6	0	0	0	0	1	0	0	*	4	0	0	0	0	0	14	4	0	1	0	0	0	2
94	0	0	0	0	1	0	0	0	0	0	1	0	0	*	0	0	0	0	0	0	0	0	1	0
95	9	*	0	7	3	0	*	0	0	4	10	0	0	0	1	0	1	1	0	0	0	0	0	2
96	*	5	1	1	2	7	0	2	2	7	2	2	0	4	2	1	2	0	2	3	3	1	2	12
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	*
98	6	2	*	0	1	0	0	0	3	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
99	*	0	0	*	1	0	0	0	0	2	2	1	4	0	2	0	0	10	2	0	1	0	10	0
100	1	*	6	3	0	0	0	1	1	0	1	4	5	2	0	0	3	1	0	0	0	1	2	0

Table 5: The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $101 \leq p \leq 199$ and $3 \leq \ell \leq 26$.

$\ell \backslash p$	101	103	107	109	113	127	131	137	139	149	151	157	163	167	173	179	181	191	193	197	199
3	0	1	0	1	0	1	0	0	1	0	1	1	1	0	0	0	2	0	1	0	1
4	1	0	0	1	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	1	0
5	2	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	2	2	0	0	0
6	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0
7	0	0	1	1	3	3	0	1	0	1	1	0	1	0	0	1	0	1	1	3	0
8	1	0	1	1	2	0	1	2	1	1	0	1	1	0	1	1	1	0	2	1	0
9	0	1	0	3	0	3	0	0	1	0	1	1	3	0	0	0	4	0	1	0	3
10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
11	0	1	0	0	1	0	0	1	0	0	0	1	1	0	0	1	1	1	0	0	5
12	1	0	0	2	0	0	0	0	0	1	0	2	0	0	1	0	2	0	2	1	0
13	0	0	2	0	2	0	6	0	2	0	0	6	0	0	0	0	0	2	0	0	0
14	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
15	0	0	1	1	1	0	0	1	1	0	4	0	0	1	1	0	4	0	0	1	1
16	1	2	1	1	4	0	1	2	1	1	2	1	1	2	1	1	1	0	4	1	2
17	0	8	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	3	0	1	0	0
19	1	0	0	0	0	0	1	1	1	1	0	1	3	0	0	0	0	9	0	3	1
20	3	1	1	1	0	2	1	0	0	1	0	1	1	2	0	0	3	0	0	1	0
21	1	0	1	0	0	6	1	0	2	1	0	0	0	0	1	0	2	1	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	1	0	0	0	0	1	1	0	11	0	1	0	1	1	1	1	0	0	1	1	0
24	2	1	1	2	0	1	2	0	0	2	1	2	0	0	2	1	2	0	4	2	1
25	11	0	0	0	0	0	2	0	0	0	10	0	0	0	0	0	2	2	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0

Table 6: The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $101 \leq p \leq 199$ and $27 \leq \ell \leq 50$.

$\ell \backslash p$	101	103	107	109	113	127	131	137	139	149	151	157	163	167	173	179	181	191	193	197	199
27	0	1	0	9	0	3	0	0	1	0	1	1	9	0	0	0	4	0	1	0	3
28	0	0	0	0	6	0	0	1	0	0	0	0	0	0	0	0	3	0	1	5	0
29	0	2	2	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	2	2
30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
31	3	1	1	3	1	0	1	0	0	5	0	3	3	0	1	0	0	5	1	0	0
32	1	2	1	1	4	0	1	2	1	1	2	1	1	2	1	1	1	0	8	1	2
33	0	0	1	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	10
34	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	1	0	1	0	0	0	0	0	1	1	1	0	3	1	1	4	1	0	0	0
36	1	0	0	6	0	0	0	0	0	1	0	2	0	0	1	0	6	0	2	3	0
37	0	0	2	0	0	2	0	6	0	18	0	2	0	0	0	0	2	0	0	2	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
39	0	5	0	2	0	1	0	1	1	1	2	12	0	1	0	0	5	0	0	1	2
40	3	2	1	3	0	3	2	0	3	3	2	2	1	3	1	3	3	2	0	2	0
41	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
42	1	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1	1	1	0	1	0
43	1	1	3	1	0	3	0	0	1	0	0	0	0	1	21	0	1	0	3	1	0
44	1	0	0	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	0
45	0	0	3	3	1	0	0	1	1	0	4	0	0	1	1	0	12	0	0	3	3
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	1	1	0	0	0	0	1	0	1	1	0	2	0	0	1	0	0	1	0	1	0
48	2	1	1	2	2	3	2	2	0	2	1	2	0	2	2	1	2	0	8	2	1
49	0	0	1	1	3	3	0	1	0	1	1	0	1	0	0	1	0	1	1	21	0
50	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0

Table 7: The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $101 \leq p \leq 199$ and $51 \leq \ell \leq 75$.

$\ell \backslash p$	101	103	107	109	113	127	131	137	139	149	151	157	163	167	173	179	181	191	193	197	199
51	0	16	1	0	1	1	1	0	0	4	1	3	0	1	2	2	0	4	1	1	0
52	1	0	0	3	2	0	1	0	0	0	3	11	1	1	1	0	5	1	0	0	0
53	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	9	0	0	0	0	0	0	0	1	0	0	0	0	3	0	1	0	0
55	0	0	1	0	0	1	8	0	0	0	0	0	0	1	1	1	1	1	1	5	5
56	1	0	0	0	12	3	1	2	5	0	1	1	0	0	1	0	6	1	2	5	0
57	0	3	0	1	0	1	0	0	0	0	8	1	3	1	0	0	1	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	1	0	0	1	0	1	1	0	0	0	1	1	0	0	1	0	1	1	1
60	0	0	0	0	0	1	2	0	2	2	0	0	0	0	0	0	6	2	0	0	2
61	0	2	0	0	0	0	6	2	0	0	0	0	0	0	0	2	0	0	0	0	2
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	1	2	3	2	0	18	1	2	2	3	4	2	2	0	1	2	6	3	5	6	0
64	1	2	1	1	4	0	1	2	1	1	2	1	1	2	1	1	1	0	16	1	2
65	3	6	0	6	0	2	24	0	2	2	4	0	0	0	2	0	10	4	0	0	0
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
67	0	1	3	0	0	1	3	0	0	3	1	1	11	1	1	0	1	0	3	0	1
68	7	0	1	0	1	2	1	16	1	3	2	3	1	1	0	2	0	4	0	0	1
69	0	0	0	1	0	0	0	0	22	0	0	0	0	0	0	1	0	0	0	0	1
70	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
71	6	5	1	1	0	0	1	0	0	0	1	1	0	7	0	5	0	1	0	0	7
72	2	1	5	6	0	3	2	0	0	2	1	2	2	0	2	5	6	0	4	6	3
73	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
74	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0
75	0	0	5	1	1	0	0	1	1	0	20	4	0	1	1	0	4	0	4	1	9

Table 8: The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $101 \leq p \leq 199$ and $76 \leq \ell \leq 100$.

$\ell \backslash p$	101	103	107	109	113	127	131	137	139	149	151	157	163	167	173	179	181	191	193	197	199
76	0	0	0	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
77	0	0	0	5	2	0	1	0	0	0	2	0	0	0	0	0	2	0	0	12	0
78	0	0	0	0	0	0	0	1	0	1	1	12	0	1	0	0	2	0	0	0	0
79	3	0	0	0	0	0	3	0	0	0	1	0	1	1	0	3	13	0	0	0	0
80	3	2	3	3	0	5	2	2	3	3	4	4	3	3	3	3	3	6	0	4	6
81	0	1	0	9	0	3	0	0	1	0	1	1	27	0	0	0	4	0	1	0	3
82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
83	0	0	0	1	1	1	1	0	0	0	1	0	0	41	1	0	0	1	1	1	1
84	2	1	4	1	2	0	0	0	3	1	0	0	1	0	2	3	2	2	1	3	1
85	14	0	2	2	2	4	0	0	2	8	2	0	2	2	2	4	0	6	2	2	2
86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0
87	1	1	0	1	1	1	1	2	2	0	1	6	0	1	0	0	1	7	0	1	1
88	2	1	1	10	1	0	9	2	1	1	0	0	0	0	1	0	0	1	0	10	6
89	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0	44	0	0	0	0	0
90	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0
91	0	0	9	2	7	3	0	2	4	2	2	0	2	3	0	5	0	9	2	0	0
92	0	0	0	0	0	0	0	10	0	0	0	0	0	0	1	0	1	0	0	1	0
93	0	0	0	2	0	1	0	1	2	0	3	2	2	0	0	1	5	2	0	0	0
94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	1	3	3	1	9	1	1	0	1	1	16	0	0	1	1	0	0	36	1	0	1
96	2	1	1	2	6	7	2	2	0	2	1	2	0	2	2	1	2	0	16	2	1
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0
99	0	0	1	12	0	0	0	0	0	0	0	0	2	0	1	2	2	0	0	0	30
100	19	1	5	1	0	2	1	0	0	9	0	5	1	2	0	0	4	0	4	1	0

Table 9: The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $211 \leq p \leq 331$ and $3 \leq \ell \leq 26$.

$\ell \backslash p$	211	223	227	229	233	239	241	251	257	263	269	271	277	281	283	293	307	311	313	317	331
3	1	1	0	1	0	0	1	0	0	0	0	1	1	0	1	0	1	0	1	0	1
4	0	0	0	1	1	0	1	0	1	0	1	0	1	1	0	1	0	0	1	1	0
5	2	0	0	0	0	0	2	2	0	0	0	2	0	2	0	0	0	2	0	0	2
6	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
7	3	0	0	0	1	3	0	0	0	1	0	0	1	3	0	0	0	0	0	1	1
8	1	0	1	1	2	0	2	1	2	0	1	0	1	2	1	1	1	0	2	1	1
9	1	1	0	1	0	0	1	0	0	0	0	3	1	0	1	0	3	0	1	0	1
10	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0
11	0	1	0	1	0	0	0	1	1	0	1	0	0	0	0	0	0	1	1	1	5
12	0	0	0	2	0	0	2	0	0	0	1	0	2	0	0	1	0	0	2	1	0
13	2	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	6	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
15	4	0	1	1	1	0	4	0	1	1	0	4	0	0	0	1	0	0	0	1	4
16	1	0	1	1	2	0	4	1	4	2	1	0	1	2	1	1	1	2	2	1	1
17	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
18	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
19	0	0	0	9	1	3	0	1	0	1	0	1	3	0	1	0	0	3	1	0	0
20	1	1	1	1	0	0	4	1	0	1	1	0	1	4	1	0	1	0	0	1	1
21	6	2	1	0	1	0	0	0	1	0	1	0	0	0	0	0	2	1	0	1	0
22	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
23	1	1	0	0	1	1	0	0	1	0	1	1	11	0	0	0	1	1	0	1	1
24	0	1	1	2	0	0	4	1	0	0	2	1	2	0	0	2	0	0	3	2	0
25	2	0	0	0	0	0	2	10	0	0	0	2	0	2	0	0	0	2	0	0	2
26	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	6	0	0

Table 10: The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $211 \leq p \leq 331$ and $27 \leq \ell \leq 50$.

$\ell \backslash p$	211	223	227	229	233	239	241	251	257	263	269	271	277	281	283	293	307	311	313	317	331
27	1	1	0	1	0	0	1	0	0	0	0	9	1	0	1	0	3	0	1	0	1
28	0	0	0	0	1	0	0	0	0	0	0	0	0	6	0	3	0	0	0	0	0
29	0	2	2	0	14	2	0	0	2	0	0	0	2	2	0	0	0	0	2	0	0
30	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0
31	5	0	2	0	3	0	0	0	1	0	0	0	0	3	3	1	1	15	0	1	0
32	1	0	1	1	2	4	4	1	8	2	1	4	1	2	1	1	1	2	2	1	1
33	1	0	0	0	0	1	4	0	0	0	0	0	1	0	0	0	4	0	0	0	10
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	12	3	1	0	0	3	0	4	1	0	0	0	0	12	1	3	3	0	1	0	1
36	0	0	0	2	2	0	2	0	0	0	3	0	2	0	0	1	0	0	2	1	0
37	6	18	0	2	0	0	0	0	0	0	6	2	0	0	0	2	0	0	0	0	0
38	0	0	0	9	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
39	1	0	1	2	0	3	0	0	0	0	0	0	2	4	1	1	2	0	12	3	0
40	2	2	1	3	0	0	8	2	0	2	3	2	2	7	1	1	1	2	0	2	2
41	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
42	0	0	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0	0	0	1	0
43	1	0	0	1	0	1	0	7	0	0	3	1	0	1	1	3	7	1	0	3	0
44	0	0	0	0	1	0	4	0	0	0	0	1	1	0	0	0	0	0	1	0	1
45	4	0	1	1	3	0	4	4	1	1	0	12	0	0	0	1	0	0	0	1	4
46	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0
47	0	0	0	0	0	1	1	1	0	1	1	1	1	0	23	0	1	0	0	0	1
48	0	3	1	2	2	0	6	1	0	2	2	3	2	2	0	2	0	2	3	2	0
49	3	0	0	0	1	3	0	0	0	7	0	0	1	3	0	0	0	0	0	1	1
50	0	0	0	0	0	0	3	0	0	0	0	0	0	2	0	0	0	0	0	0	0

Table 11: The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $211 \leq p \leq 331$ and $51 \leq \ell \leq 75$.

$\ell \backslash p$	211	223	227	229	233	239	241	251	257	263	269	271	277	281	283	293	307	311	313	317	331
51	0	1	1	1	1	0	0	4	2	3	1	7	0	2	0	4	16	1	0	1	1
52	0	2	1	2	6	3	0	0	1	0	1	1	1	3	0	0	3	0	12	3	1
53	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	2	2	2	0	0	2
54	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
55	0	0	1	1	1	0	9	1	0	7	1	0	1	0	1	1	5	1	0	0	20
56	2	0	1	1	2	3	0	5	0	1	1	0	0	11	1	6	5	0	0	0	0
57	0	1	0	18	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	3
58	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	1	0	0	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0	1	1
60	0	0	0	0	0	0	8	2	0	0	2	0	0	0	0	0	1	2	0	0	0
61	0	0	0	0	0	2	6	0	10	0	2	0	0	0	0	0	0	0	0	2	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
63	6	2	1	2	3	0	3	0	1	2	1	0	4	0	2	0	6	1	2	3	4
64	1	8	1	1	2	4	4	1	16	2	1	4	1	2	1	1	1	2	2	1	1
65	4	0	0	6	6	6	0	2	2	0	2	0	2	4	2	0	0	10	0	0	0
66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
67	1	3	1	0	0	0	3	0	1	3	33	0	3	0	3	3	1	0	0	1	0
68	2	2	1	1	0	0	1	5	1	2	1	0	0	1	2	3	1	1	0	0	2
69	0	1	0	10	0	0	0	0	0	0	0	1	22	0	0	1	0	0	0	1	0
70	0	0	0	0	0	2	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0
71	0	1	0	1	5	0	0	1	0	1	0	1	1	0	0	1	0	1	1	0	0
72	0	1	1	2	4	0	4	5	0	0	6	3	2	0	0	2	2	0	3	2	0
73	0	4	12	0	0	0	0	4	0	0	0	0	0	0	12	36	0	0	0	0	0
74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	4	0	1	1	1	0	4	0	5	1	0	4	0	0	0	5	4	0	0	1	4

Table 12: The values $\lambda_p^-(\mathbf{Q}(\zeta_\ell))$ for $211 \leq p \leq 331$ and $76 \leq \ell \leq 100$.

$\ell \backslash p$	211	223	227	229	233	239	241	251	257	263	269	271	277	281	283	293	307	311	313	317	331
76	0	0	0	17	0	0	0	0	0	0	1	0	2	0	0	2	1	1	0	0	0
77	0	2	0	0	0	0	1	2	0	5	0	1	0	0	0	0	0	0	0	0	4
78	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	12	0	0
79	0	3	0	0	0	1	1	0	1	1	1	0	1	1	3	0	0	0	1	39	0
80	2	4	3	3	2	0	14	2	0	2	3	6	4	7	3	3	3	4	2	4	2
81	1	1	0	1	0	0	1	0	0	0	0	9	1	0	1	0	3	0	1	0	1
82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
83	0	0	1	1	0	0	1	0	0	0	0	0	1	0	0	1	0	0	1	1	0
84	0	3	0	0	1	3	0	0	1	2	2	1	1	2	1	3	3	0	0	1	1
85	0	4	2	4	2	8	0	6	4	4	2	14	2	2	2	0	0	0	2	2	2
86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
87	0	1	0	0	0	0	1	1	1	1	1	0	1	0	1	1	6	2	2	1	6
88	1	1	1	0	1	0	9	0	1	0	0	1	2	0	1	1	9	1	2	0	5
89	0	4	0	0	0	0	0	0	0	0	4	4	0	0	4	0	0	0	0	0	4
90	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0
91	7	3	3	3	5	7	3	0	0	9	4	3	5	6	0	3	9	0	0	2	2
92	0	0	0	11	0	0	0	0	0	0	0	0	21	0	0	0	1	0	0	0	0
93	4	4	0	0	0	0	0	1	0	1	0	2	3	0	2	0	0	0	1	0	1
94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	1	9	9	0	3	0	1	1	0	0	1	0	0	0	3	1	7	0	1	4
96	0	7	1	2	2	4	6	1	0	2	2	3	2	2	0	2	0	2	3	2	0
97	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
99	1	0	0	0	0	1	4	2	0	0	2	0	1	0	0	0	12	0	0	0	10
100	1	1	1	1	0	0	5	1	4	1	1	0	1	4	1	4	5	0	0	1	1