

Tables of sizes of random complete arcs in the plane $PG(2, q)$

Daniele Bartoli

Dipartimento di Matematica e Informatica, Università degli Studi di Perugia,
Via Vanvitelli 1, Perugia, 06123, Italy. E-mail: daniele.bartoli@dmi.unipg.it

Alexander A. Davydov

Institute for Information Transmission Problems (Kharkevich institute), Russian Academy of Sciences
Bol'shoi Karetnyi per. 19, GSP-4, Moscow, 127994, Russia. E-mail: adav@iitp.ru

Giorgio Faina, Stefano Marcugini and Fernanda Pambianco

Dipartimento di Matematica e Informatica, Università degli Studi di Perugia,
Via Vanvitelli 1, Perugia, 06123, Italy. E-mail: {faina,gino,fernanda}@dmi.unipg.it

Abstract

Tables of sizes of random complete arcs in the plane $PG(2, q)$ are given. The sizes are close to the smallest known sizes of complete arcs in $PG(2, q)$, in particular, to ones constructed by Algorithm FOP (fixed order of points). The random arcs are obtained in the region $\{3 \leq q \leq 46337, q \text{ prime}\}$.

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1 Introduction

Let $PG(2, q)$ be the projective plane over the Galois field F_q . An n -arc is a set of n points no three of which are collinear. An n -arc is called complete if it is not contained in an $(n+1)$ -arc of $PG(2, q)$. For an introduction to projective geometries over finite fields see [30, 47, 49].

In [32, 55] the close relationship among the theory of n -arcs, coding theory, and mathematical statistics is presented. In particular, a complete arc in a plane $PG(2, q)$, the points

of which are treated as 3-dimensional q -ary columns, defines a parity check matrix of a q -ary linear code with codimension 3, Hamming distance 4, and covering radius 2. Arcs can be interpreted as linear maximum distance separable (MDS) codes [53, Sec. 7], [56] and they are related to optimal coverings arrays [28] and to superregular matrices [33].

One of the main problems in the study of projective planes, which is also of interest in coding theory, is finding of the spectrum of possible sizes of complete arcs. In particular, the value of $t_2(2, q)$, the smallest size of a complete arc in $PG(2, q)$, is interesting. Finding estimates of the minimum size $t_2(2, q)$ is a hard open problem.

This work is devoted to *random complete arcs* in $PG(2, q)$ and to the comparison of their sizes with *upper bounds* on $t_2(2, q)$.

Surveys of results on the sizes of plane complete arcs, methods of their construction, and comprehension of the relating properties can be found in [4, 6–10, 12, 16, 17, 22, 29, 30, 32, 34, 37, 41, 43–45, 47–54]. Some problems connected with small complete plane arcs are considered in [1, 3–5, 9, 10, 18, 19, 23–26, 29, 30, 32, 34, 35, 40, 42, 46, 57].

The exact values of $t_2(2, q)$ are known only for $q \leq 32$; see [2, 21, 27, 30, 31, 36, 38, 39] and work [13] where the equalities $t_2(2, 31) = t_2(2, 32) = 14$ are established.

Let $t(\mathcal{P}_q)$ be the size of the smallest complete arc in any (not necessarily Galois) projective plane \mathcal{P}_q of order q . In [34], for *sufficiently large* q , the following result is proven by *probabilistic methods* (we give it in the form of [32, Table 2.6] taking into account that all logarithms in [34] have natural base, see [34, p. 10]):

$$t(\mathcal{P}_q) \leq D\sqrt{q} \ln^C q, \quad C \leq 300, \quad (1.1)$$

where C and D are constants independent of q (so-called universal or absolute constants). The authors of [34] conjecture that the constant can be reduced to $C = 10$. A survey and an analysis of random constructions for geometrical objects can be found in [24]; see also the references therein.

Regarding complete arcs of sizes smaller $\frac{1}{2}q$ obtained by algebraic constructions, following [32, p. 209], complete arcs in $PG(2, q)$ have been constructed with sizes approximately $\frac{1}{3}q$ (see [1, 6, 35, 50, 51, 57]), $\frac{1}{4}q$ (see [6, 35, 52]), $2q^{0.9}$ (see [50] where such arcs are constructed for $q > 7^{10}$). It is noted in [24, Sec. 8], that the smallest size of a complete arc in $PG(2, q)$ obtained via algebraic constructions is $cq^{3/4}$ where c is a universal constant; see [52, Sec. 3] and [53, Th. 6.8].

In [6, 7], for large ranges of q , the form of the bound of (1.1) is applied but the value of the constant C was essentially reduced to $C = 0.75$ [6] and to $C = 0.73$ [7] whereas $D < 1$. In particular, the following results are obtained in [6, 7] using randomized greedy algorithms:

$$t_2(2, q) < \sqrt{q} \ln^{0.75} q \quad \text{for } 23 \leq q \leq 5107 \text{ [6];} \quad (1.2)$$

$$t_2(2, q) < \sqrt{q} \ln^{0.73} q \quad \text{for } 109 \leq q \leq 13627 \text{ [7].} \quad (1.3)$$

In [5], the smallest known sizes of complete arcs in $PG(2, q)$ (up to November 2013) are collected for the following huge region H :

$$H = \{q : 173 \leq q \leq 49727, q \text{ power prime}\} \cup \{q : 173 \leq q \leq 125003, q \text{ prime}\} \cup \{59 \text{ sporadic prime } q\text{'s in the interval } [125101 \dots 360007], \text{ see [5, Table 7]}\}. \quad (1.4)$$

The data collected in [5–7] provide the following result.

$$t_2(2, q) < \sqrt{q} \ln^{0.7295} q \quad \text{for } 109 \leq q \leq 169 \text{ and } q \in H. \quad (1.5)$$

In the recent works of the authors, see [10–12], a new Algorithm FOP (fixed order of points) constructing small complete arcs in $PG(2, q)$ is proposed. Lexicographical and the Singer fixed orders of points are investigated. We denote

$$L = \{q : 3 \leq q \leq 67993, q \text{ prime}\} \cup \{43 \text{ sporadic prime } q\text{'s in } [69997 \dots 190027]\}; \quad (1.6)$$

$$S = \{q : 5 \leq q \leq 40009, q \text{ prime}\}. \quad (1.7)$$

Let $t_2^L(2, q)$ be the size of complete arcs in $PG(2, q)$ obtained by Algorithm FOP with Lexicographical order of points. Let $t_2^S(2, q)$ be the size of complete arcs in $PG(2, q)$ obtained by Algorithm FOP with Singer order of points. Values of $t_2^L(2, q)$ in the region L and $t_2^S(2, q)$ in the region S are collected in [9].

The data collected in [9] provide the following **upper bounds** on $t_2(2, q)$:

$$t_2(2, q) < t_2^L(2, q) < 1.83\sqrt{q \ln q} \quad \text{if } q \in L; \quad (1.8)$$

$$t_2(2, q) < t_2^S(2, q) < 1.83\sqrt{q \ln q} \quad \text{if } q \in S. \quad (1.9)$$

In [14, 34] it is noted that, in a preliminary report in 1989, J. C. Fisher obtained by computer search complete arcs in many planes of small orders and conjectured that average size of a complete arc is about

$$\sqrt{3q \log q}. \quad (1.10)$$

We denote

$$R = \{3 \leq q \leq 46337, q \text{ prime}\}. \quad (1.11)$$

In this work, we collect the sizes $t_2^R(2, q)$ of *random complete arcs* in $PG(2, q)$ in the region R . The collected sizes are represented in Table 1 and in Figure 1. For comparison, we also give Figures 2 and 3 with the sizes $t_2^L(2, q)$ and $t_2^S(2, q)$ of complete arcs obtained by Algorithm FOP with Lexicographical and Singer orders of points. Finally, we represent differences $t_2^L(2, q) - t_2^R(2, q)$ and $t_2^S(2, q) - t_2^R(2, q)$ in Figures 4 and 5.

The random arcs are obtained in this work with the help of a random generator used in a C++ program under the system Linux. A complete arc is constructed step-by-step in a random manner. At every step a point of the plane is selected randomly: if the point is not covered by bisecants of the arc, then it is added to the arc; otherwise, another point is selected. The process stops when a complete arc is obtained.

From Table 1 and Figure 1 it follows that

$$t_2^R(2, q) < 1.83\sqrt{q \ln q} \text{ if } q \in R. \quad (1.12)$$

So, *the sizes of random arcs in the region R satisfy the upper bounds on $t_2(2, q)$ given in (1.8), (1.9)*. One can say also that *the conjecture (1.10) holds in the region R, see Figure 1*.

2 Table. Figures

The sizes $t_2^R = t_2^R(2, q)$ of random complete arcs in planes $PG(2, q)$, $3 \leq q \leq 46337$, q prime, are shown in Table 1, see pp. 10–32.

In Figure 1, values $t_2^R(2, q)/\sqrt{q \ln q}$, $q \in R$, are shown. The values oscillate around line $y = 1.803$; it means that the conjecture (1.10) holds in the region R .

We denote

$$L^\# = \{195023, 200003, 205019, 210011, 215051, 220009, 225023, 230003\}. \quad (2.1)$$

Sizes $t_2^L(2, q)$ of small complete arcs in $PG(2, q)$ obtained by Algorithm FOP with Lexicographical order in the region $L^\#$ are obtained in this work. Values $t_2^L(2, q)$ corresponding to q 's of (2.1) are as follows:

$$\{2781, 2822, 2864, 2886, 2938, 2958, 3002, 3033\}. \quad (2.2)$$

In Figure 2, values $t_2^L(2, q)/\sqrt{q \ln q}$, $q \in L \cup L^\#$, are shown. In Figure 3, values $t_2^S(2, q)/\sqrt{q \ln q}$, $q \in S$, are given.

One can see that Figures 1 and 2, 3 have the very similar structures. It is expected, as Lexicographical order of points is a random order in the geometrical sense. Singer order, of course, has a geometrical sense but this sense is not connected with constructing of arcs and with covering of points by bisecants. It is why Singer order also may be treated as a random order.

In Figures 4 and 5, the differences $t_2^L(2, q) - t_2^R(2, q)$ and $t_2^S(2, q) - t_2^L(2, q)$ in percentage are represented. We show values $\frac{t_2^L(2, q) - t_2^R(2, q)}{t_2^L(2, q)} 100\%$ in the region R and values of $\frac{t_2^S(2, q) - t_2^L(2, q)}{t_2^S(2, q)} 100\%$ in the region S . Note that the differences are less than 3% for $q > 3000$.

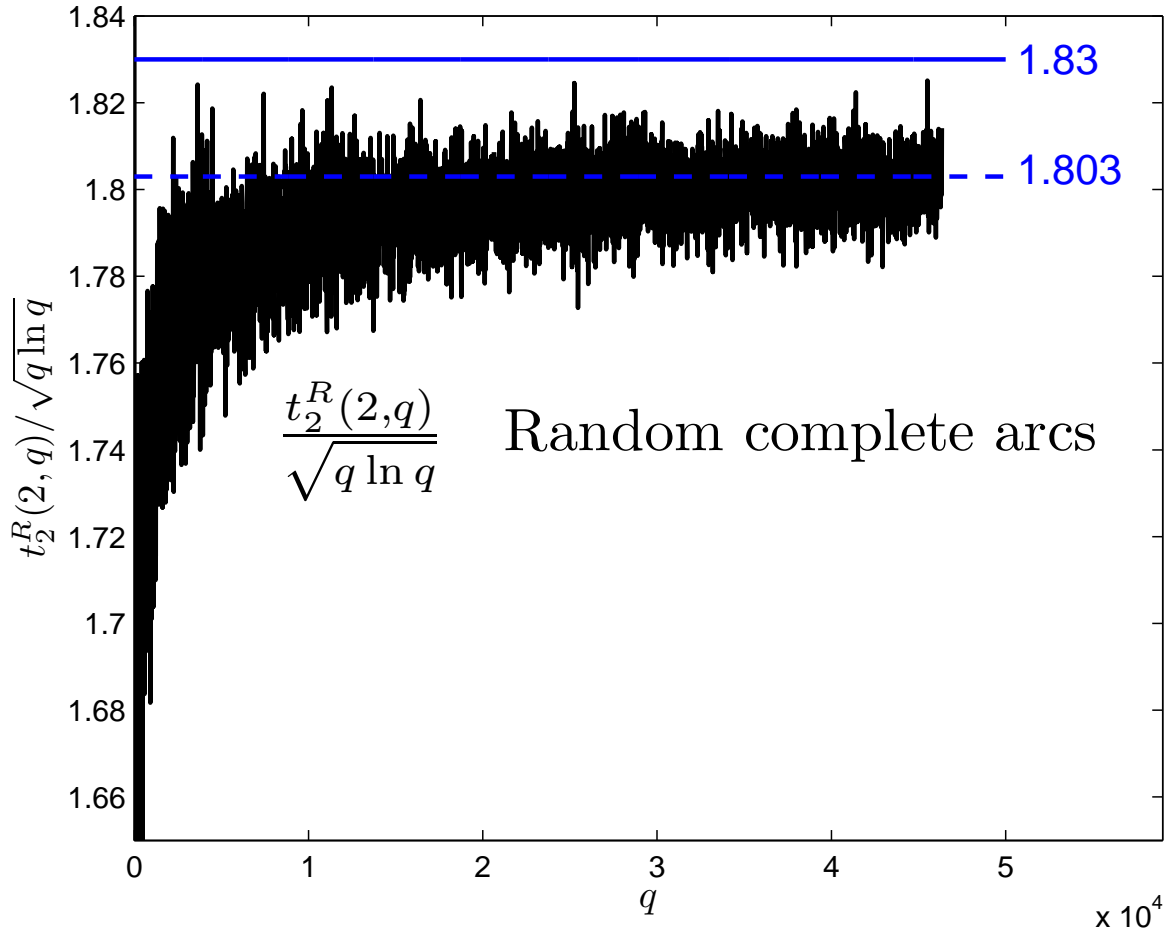


Figure 1: **Bound $1.83\sqrt{q \ln q}$ vs random complete arcs.** $y = 1.83$ (the top solid line); $y = 1.803$ (the 2-nd dashed line); values $t_2^R(2, q)/\sqrt{q \ln q}$, $q \in R$, where $t_2^R(2, q)$ is the size of a random complete arc (the solid curve)

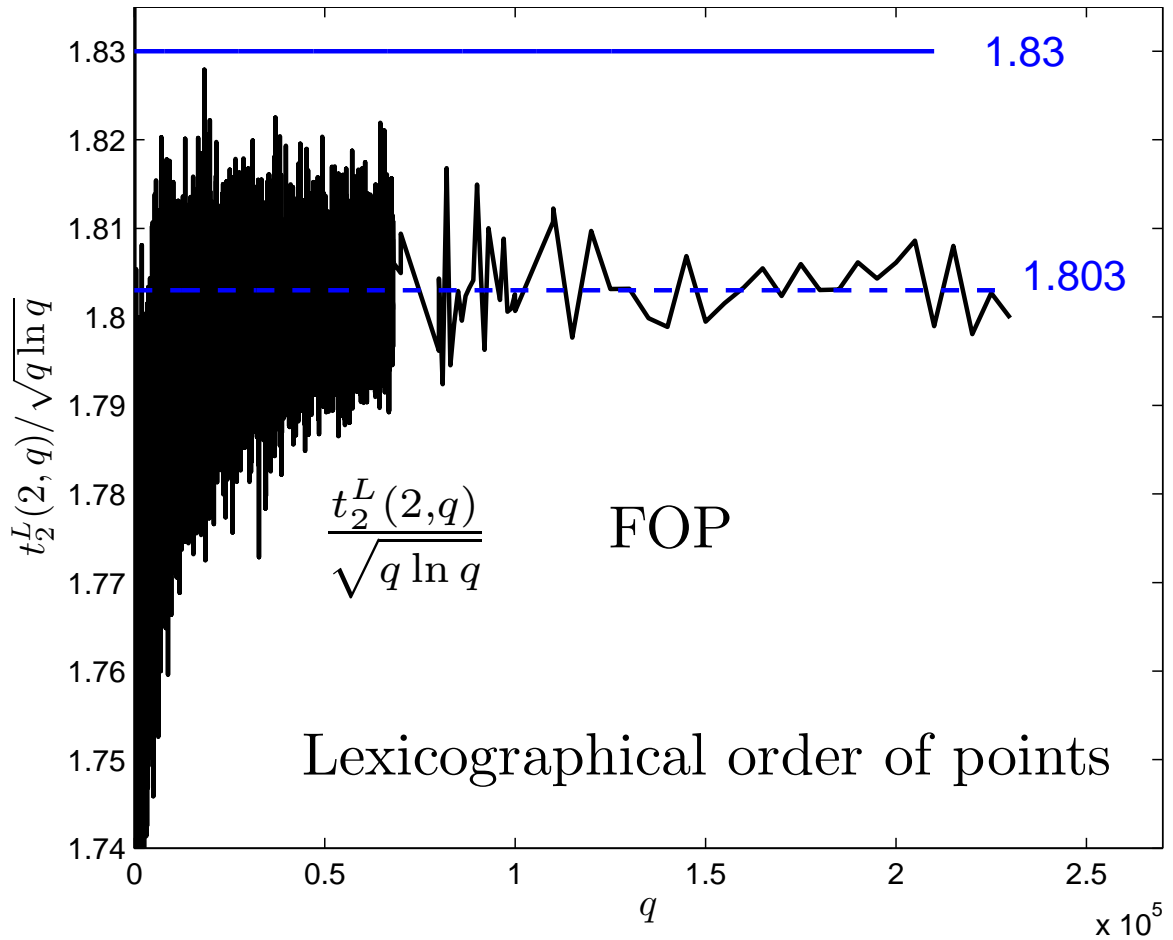


Figure 2: **Bound $1.83\sqrt{q \ln q}$ vs Algorithm's FOP Lexicographical results.** $y = 1.83$ (the top solid line); $y = 1.803$ (the 2-nd dashed line); values $t_2^L(2, q) / \sqrt{q \ln q}$, $q \in L \cup L^\#$, where $t_2^L(2, q)$ is the size of a complete arc obtained by Algorithm FOP with Lexicographical order of points (the solid curve)

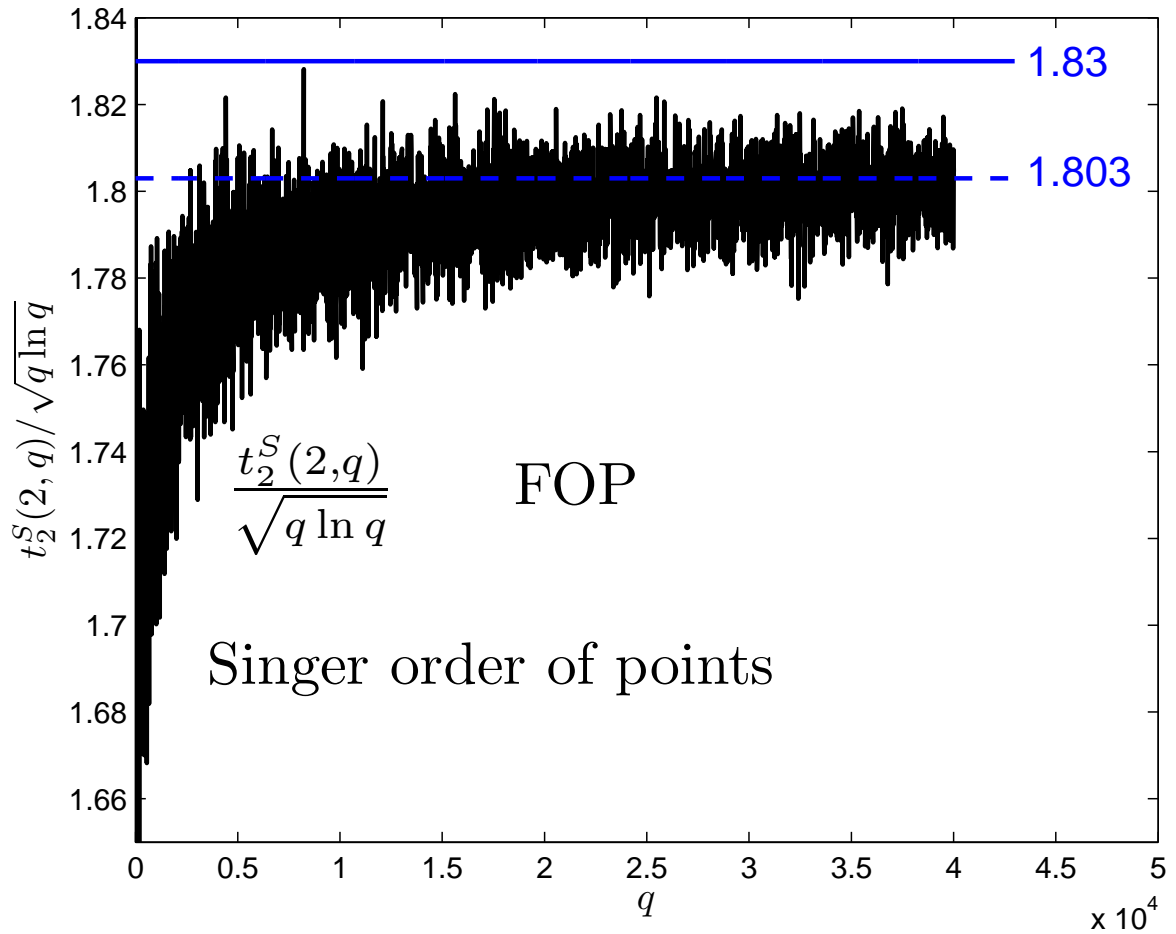


Figure 3: **Bound $1.83\sqrt{q \ln q}$ vs Algorithm's FOP Singer results.** $y = 1.83$ (the top solid line); $y = 1.803$ (the 2-nd dashed line); values $t_2^S(2, q) / \sqrt{q \ln q}$, $q \in S$, where $t_2^S(2, q)$ is the size of a complete arc obtained by Algorithm FOP with Singer order of points (the solid curve)

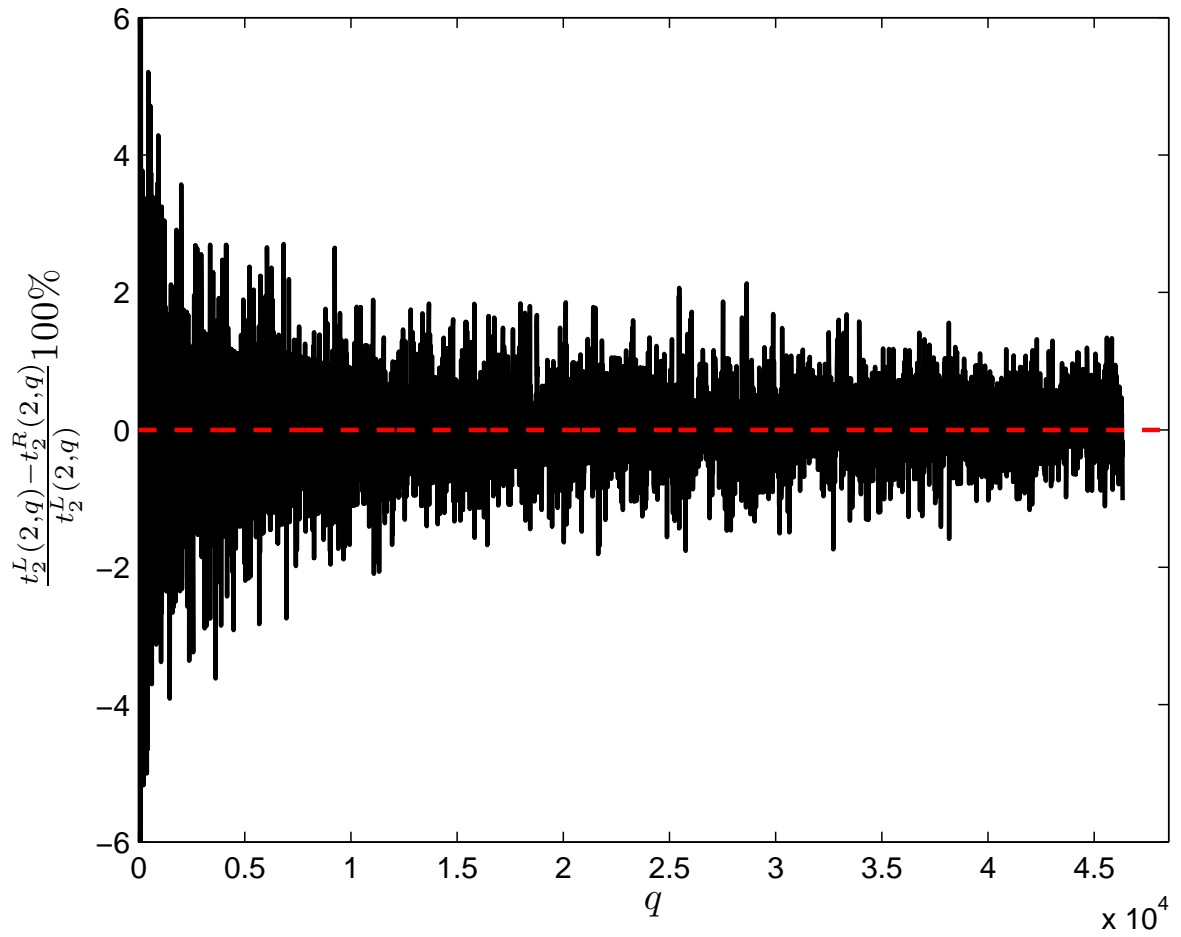


Figure 4: **Difference $t_2^L(2, q) - t_2^R(2, q)$ in percentage.** $\frac{t_2^L(2,q) - t_2^R(2,q)}{t_2^L(2,q)} 100\%$, $q \in R$ (the solid curve)

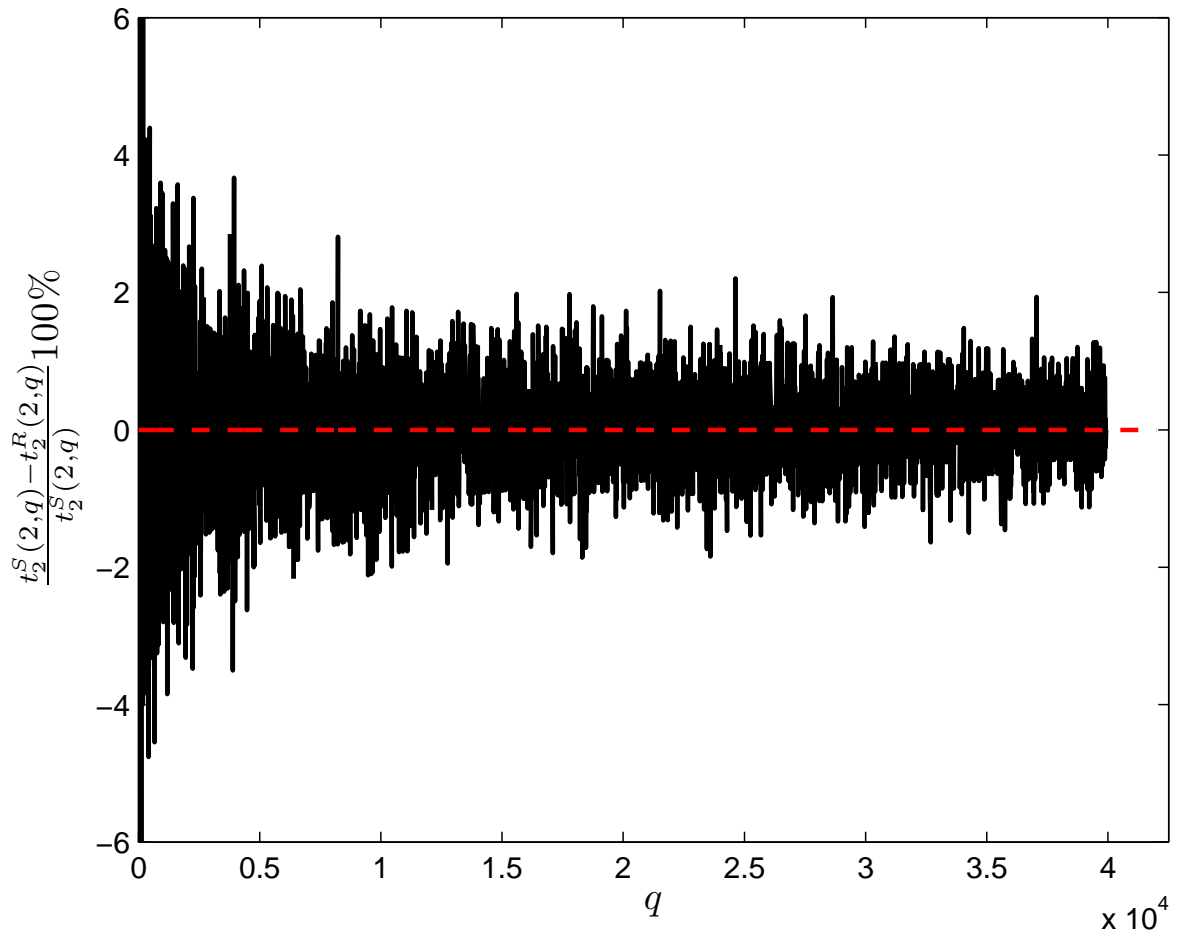


Figure 5: **Difference $t_2^S(2, q) - t_2^R(2, q)$ in percentage.** $\frac{t_2^S(2, q) - t_2^R(2, q)}{t_2^S(2, q)} 100\%$, $q \in S$ (the solid curve)

Table 1 The sizes $t_2^R = t_2^R(2, q)$ of random complete arcs in planes $\text{PG}(2, q)$, $3 \leq q \leq 46337$, q prime

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
3	4	5	6	7	6	11	8	13	10	17	11
19	13	23	13	29	15	31	16	37	19	41	20
43	20	47	21	53	24	59	24	61	25	67	28
71	30	73	28	79	30	83	33	89	34	97	33
101	37	103	35	107	35	109	36	113	38	127	42
131	41	137	45	139	44	149	46	151	46	157	47
163	47	167	48	173	49	179	51	181	52	191	52
193	56	197	54	199	55	211	58	223	57	227	59
229	61	233	60	239	61	241	63	251	62	257	63
263	63	269	66	271	66	277	67	281	68	283	69
293	68	307	70	311	72	313	72	317	74	331	75
337	74	347	78	349	79	353	77	359	78	367	81
373	81	379	82	383	83	389	84	397	84	401	83
409	83	419	88	421	86	431	90	433	90	439	90
443	90	449	89	457	91	461	91	463	87	467	93
479	95	487	96	491	93	499	97	503	96	509	96
521	98	523	98	541	100	547	102	557	101	563	101
569	102	571	106	577	105	587	103	593	105	599	107
601	107	607	108	613	108	617	108	619	107	631	112
641	109	643	113	647	113	653	111	659	115	661	111
673	114	677	116	683	116	691	117	701	116	709	118
719	118	727	120	733	120	739	122	743	122	751	123
757	121	761	123	769	127	773	126	787	123	797	127
809	129	811	127	821	129	823	128	827	130	829	132
839	132	853	131	857	133	859	132	863	133	877	134
881	135	883	135	887	134	907	135	911	134	919	136
929	134	937	141	941	141	947	141	953	140	967	141
971	139	977	143	983	140	991	142	997	146	1009	148
1013	148	1019	146	1021	147	1031	148	1033	146	1039	150
1049	147	1051	151	1061	150	1063	153	1069	150	1087	152
1091	155	1093	149	1097	155	1103	156	1109	155	1117	154
1123	153	1129	157	1151	158	1153	156	1163	157	1171	161
1181	160	1187	162	1193	160	1201	159	1213	160	1217	159
1223	164	1229	164	1231	166	1237	161	1249	167	1259	164
1277	168	1279	166	1283	167	1289	169	1291	170	1297	169

Table 1 Continue 1

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
1301	170	1303	170	1307	170	1319	174	1321	170	1327	173
1361	175	1367	174	1373	173	1381	174	1399	180	1409	177
1423	178	1427	178	1429	176	1433	180	1439	177	1447	182
1451	183	1453	179	1459	181	1471	186	1481	184	1483	185
1487	182	1489	181	1493	185	1499	185	1511	183	1523	183
1531	185	1543	187	1549	187	1553	189	1559	187	1567	187
1571	188	1579	187	1583	189	1597	193	1601	192	1607	193
1609	193	1613	193	1619	194	1621	189	1627	195	1637	193
1657	199	1663	196	1667	198	1669	195	1693	200	1697	196
1699	195	1709	200	1721	198	1723	198	1733	201	1741	200
1747	205	1753	201	1759	199	1777	201	1783	202	1787	206
1789	200	1801	202	1811	203	1823	208	1831	207	1847	204
1861	207	1867	207	1871	210	1873	208	1877	209	1879	209
1889	208	1901	208	1907	213	1913	214	1931	210	1933	216
1949	218	1951	214	1973	215	1979	216	1987	217	1993	218
1997	217	1999	218	2003	216	2011	215	2017	216	2027	217
2029	220	2039	217	2053	221	2063	225	2069	222	2081	221
2083	223	2087	224	2089	219	2099	225	2111	224	2113	225
2129	225	2131	228	2137	225	2141	226	2143	226	2153	227
2161	226	2179	228	2203	231	2207	227	2213	229	2221	232
2237	238	2239	234	2243	230	2251	234	2267	229	2269	234
2273	238	2281	237	2287	232	2293	237	2297	238	2309	239
2311	239	2333	234	2339	235	2341	242	2347	236	2351	237
2357	239	2371	240	2377	239	2381	241	2383	240	2389	241
2393	246	2399	241	2411	241	2417	242	2423	243	2437	244
2441	245	2447	244	2459	245	2467	246	2473	250	2477	247
2503	248	2521	247	2531	250	2539	249	2543	249	2549	250
2551	251	2557	255	2579	255	2591	252	2593	254	2609	251
2617	250	2621	255	2633	252	2647	259	2657	256	2659	257
2663	257	2671	256	2677	255	2683	254	2687	255	2689	258
2693	259	2699	260	2707	254	2711	257	2713	261	2719	259
2729	261	2731	262	2741	261	2749	260	2753	259	2767	258
2777	267	2789	264	2791	262	2797	263	2801	266	2803	261
2819	264	2833	265	2837	267	2843	262	2851	269	2857	266
2861	268	2879	268	2887	266	2897	271	2903	271	2909	267

Table 1 Continue 2

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
2917	268	2927	271	2939	271	2953	272	2957	267	2963	269
2969	275	2971	274	2999	274	3001	272	3011	275	3019	274
3023	279	3037	276	3041	272	3049	281	3061	277	3067	276
3079	275	3083	279	3089	281	3109	279	3119	285	3121	283
3137	285	3163	279	3167	283	3169	282	3181	283	3187	285
3191	280	3203	288	3209	286	3217	283	3221	288	3229	288
3251	287	3253	290	3257	289	3259	289	3271	290	3299	290
3301	287	3307	290	3313	292	3319	293	3323	291	3329	292
3331	293	3343	292	3347	291	3359	296	3361	294	3371	289
3373	299	3389	292	3391	295	3407	293	3413	292	3433	296
3449	298	3457	298	3461	296	3463	297	3467	296	3469	297
3491	301	3499	301	3511	298	3517	300	3527	302	3529	302
3533	304	3539	304	3541	305	3547	301	3557	307	3559	302
3571	301	3581	302	3583	302	3593	304	3607	303	3613	307
3617	306	3623	307	3631	304	3637	315	3643	309	3659	305
3671	309	3673	307	3677	310	3691	309	3697	308	3701	310
3709	308	3719	313	3727	310	3733	311	3739	315	3761	314
3767	314	3769	314	3779	307	3793	315	3797	317	3803	317
3821	320	3823	319	3833	318	3847	320	3851	319	3853	321
3863	314	3877	316	3881	319	3889	325	3907	319	3911	317
3917	320	3919	319	3923	317	3929	320	3931	323	3943	315
3947	320	3967	322	3989	329	4001	320	4003	327	4007	328
4013	322	4019	323	4021	323	4027	327	4049	321	4051	326
4057	324	4073	327	4079	328	4091	329	4093	330	4099	327
4111	329	4127	325	4129	332	4133	329	4139	326	4153	333
4157	331	4159	332	4177	338	4201	333	4211	333	4217	334
4219	332	4229	334	4231	335	4241	336	4243	337	4253	337
4259	334	4261	336	4271	340	4273	337	4283	338	4289	337
4297	335	4327	338	4337	335	4339	337	4349	339	4357	337
4363	342	4373	336	4391	342	4397	342	4409	339	4421	340
4423	346	4441	344	4447	344	4451	344	4457	346	4463	346
4481	353	4483	352	4493	344	4507	344	4513	347	4517	346
4519	348	4523	345	4547	346	4549	351	4561	352	4567	346
4583	353	4591	347	4597	349	4603	349	4621	354	4637	350
4639	352	4643	350	4649	351	4651	353	4657	352	4663	355

Table 1 Continue 3

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	\bar{t}_{2y}	q	t_2^R
4673	354	4679	355	4691	357	4703	357	4721	358	4723	354
4729	354	4733	356	4751	357	4759	360	4783	361	4787	357
4789	362	4793	357	4799	362	4801	360	4813	360	4817	361
4831	357	4861	362	4871	364	4877	361	4889	364	4903	363
4909	364	4919	365	4931	362	4933	362	4937	365	4943	363
4951	367	4957	363	4967	368	4969	368	4973	365	4987	365
4993	367	4999	366	5003	370	5009	366	5011	370	5021	371
5023	372	5039	370	5051	369	5059	373	5077	368	5081	368
5087	369	5099	370	5101	372	5107	368	5113	371	5119	375
5147	372	5153	372	5167	373	5171	371	5179	378	5189	375
5197	375	5209	373	5227	372	5231	380	5233	370	5237	377
5261	379	5273	378	5279	383	5281	378	5297	381	5303	381
5309	378	5323	376	5333	381	5347	382	5351	383	5381	383
5387	386	5393	380	5399	381	5407	383	5413	384	5417	382
5419	384	5431	384	5437	386	5441	384	5443	387	5449	385
5471	386	5477	385	5479	387	5483	388	5501	391	5503	388
5507	386	5519	392	5521	388	5527	388	5531	390	5557	387
5563	389	5569	393	5573	390	5581	393	5591	391	5623	391
5639	397	5641	393	5647	392	5651	392	5653	391	5657	393
5659	393	5669	392	5683	400	5689	392	5693	399	5701	394
5711	397	5717	400	5737	400	5741	395	5743	393	5749	400
5779	400	5783	397	5791	402	5801	400	5807	401	5813	402
5821	401	5827	402	5839	405	5843	403	5849	402	5851	402
5857	402	5861	405	5867	400	5869	399	5879	402	5881	400
5897	407	5903	405	5923	404	5927	403	5939	401	5953	409
5981	403	5987	407	6007	407	6011	408	6029	410	6037	412
6043	410	6047	403	6053	403	6067	408	6073	410	6079	409
6089	409	6091	411	6101	409	6113	409	6121	414	6131	414
6133	416	6143	412	6151	410	6163	413	6173	418	6197	418
6199	414	6203	417	6211	414	6217	418	6221	412	6229	416
6247	415	6257	413	6263	414	6269	419	6271	418	6277	412
6287	420	6299	415	6301	421	6311	414	6317	419	6323	419
6329	420	6337	421	6343	418	6353	422	6359	422	6361	416
6367	415	6373	422	6379	422	6389	422	6397	425	6421	425
6427	423	6449	426	6451	424	6469	424	6473	428	6481	431

Table 1 Continue 4

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
6491	427	6521	423	6529	426	6547	427	6551	425	6553	432
6563	423	6569	431	6571	429	6577	432	6581	425	6599	427
6607	434	6619	432	6637	431	6653	429	6659	435	6661	429
6673	435	6679	431	6689	435	6691	434	6701	434	6703	428
6709	434	6719	435	6733	438	6737	437	6761	435	6763	441
6779	439	6781	436	6791	435	6793	437	6803	433	6823	436
6827	437	6829	436	6833	432	6841	437	6857	441	6863	440
6869	440	6871	439	6883	439	6899	443	6907	439	6911	438
6917	447	6947	441	6949	443	6959	442	6961	443	6967	449
6971	447	6977	446	6983	447	6991	447	6997	449	7001	442
7013	447	7019	445	7027	446	7039	445	7043	447	7057	448
7069	445	7079	446	7103	448	7109	449	7121	453	7127	446
7129	446	7151	447	7159	451	7177	454	7187	453	7193	450
7207	453	7211	457	7213	448	7219	453	7229	454	7237	450
7243	455	7247	456	7253	455	7283	456	7297	454	7307	454
7309	453	7321	453	7331	451	7333	453	7349	458	7351	455
7369	459	7393	461	7411	463	7417	456	7433	469	7451	456
7457	457	7459	465	7477	458	7481	458	7487	459	7489	465
7499	463	7507	459	7517	467	7523	462	7529	467	7537	461
7541	466	7547	462	7549	464	7559	458	7561	464	7573	467
7577	465	7583	467	7589	459	7591	469	7603	465	7607	462
7621	465	7639	465	7643	462	7649	470	7669	469	7673	470
7681	467	7687	469	7691	469	7699	471	7703	471	7717	468
7723	471	7727	469	7741	467	7753	475	7757	467	7759	468
7789	473	7793	470	7817	471	7823	474	7829	472	7841	473
7853	471	7867	475	7873	479	7877	474	7879	475	7883	473
7901	476	7907	475	7919	479	7927	478	7933	478	7937	478
7949	473	7951	474	7963	476	7993	484	8009	476	8011	474
8017	481	8039	482	8053	480	8059	482	8069	486	8081	481
8087	482	8089	481	8093	484	8101	483	8111	484	8117	488
8123	484	8147	482	8161	483	8167	483	8171	487	8179	486
8191	487	8209	489	8219	488	8221	485	8231	484	8233	490
8237	487	8243	487	8263	488	8269	491	8273	486	8287	493
8291	492	8293	491	8297	483	8311	492	8317	489	8329	492
8353	495	8363	495	8369	490	8377	493	8387	491	8389	491

Table 1 Continue 5

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
8419	496	8423	495	8429	496	8431	495	8443	494	8447	494
8461	497	8467	497	8501	495	8513	497	8521	495	8527	498
8537	493	8539	497	8543	498	8563	495	8573	497	8581	495
8597	500	8599	497	8609	502	8623	496	8627	499	8629	497
8641	505	8647	504	8663	507	8669	503	8677	500	8681	501
8689	503	8693	507	8699	506	8707	504	8713	507	8719	505
8731	506	8737	502	8741	506	8747	504	8753	508	8761	501
8779	503	8783	504	8803	509	8807	502	8819	501	8821	510
8831	511	8837	507	8839	506	8849	501	8861	505	8863	508
8867	506	8887	507	8893	511	8923	513	8929	510	8933	512
8941	507	8951	509	8963	511	8969	506	8971	510	8999	513
9001	511	9007	517	9011	514	9013	519	9029	511	9041	515
9043	520	9049	514	9059	512	9067	515	9091	514	9103	514
9109	513	9127	517	9133	514	9137	515	9151	513	9157	517
9161	511	9173	516	9181	521	9187	517	9199	517	9203	516
9209	520	9221	520	9227	519	9239	523	9241	514	9257	523
9277	522	9281	523	9283	523	9293	520	9311	523	9319	527
9323	521	9337	525	9341	518	9343	523	9349	523	9371	525
9377	524	9391	527	9397	522	9403	529	9413	527	9419	527
9421	522	9431	526	9433	525	9437	529	9439	527	9461	525
9463	527	9467	524	9473	531	9479	523	9491	521	9497	524
9511	525	9521	530	9533	532	9539	529	9547	526	9551	537
9587	532	9601	535	9613	530	9619	531	9623	533	9629	528
9631	529	9643	530	9649	541	9661	534	9677	531	9679	530
9689	534	9697	530	9719	539	9721	536	9733	536	9739	537
9743	537	9749	539	9767	542	9769	531	9781	533	9787	534
9791	537	9803	536	9811	539	9817	541	9829	540	9833	537
9839	536	9851	541	9857	537	9859	539	9871	538	9883	544
9887	536	9901	535	9907	545	9923	540	9929	539	9931	542
9941	547	9949	541	9967	544	9973	539	9973	545	10007	542
10009	542	10037	547	10039	545	10061	545	10067	547	10069	545
10079	545	10091	549	10093	545	10099	548	10103	550	10111	546
10133	547	10139	548	10141	551	10151	548	10159	547	10163	550
10169	546	10177	551	10181	553	10193	546	10211	551	10223	544
10243	554	10247	548	10253	552	10259	555	10267	547	10271	552

Table 1 Continue 6

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
10273	549	10289	549	10301	555	10303	557	10313	550	10321	553
10331	555	10333	554	10337	554	10343	555	10357	556	10369	556
10391	554	10399	553	10427	555	10429	554	10433	552	10453	564
10457	555	10459	551	10463	556	10477	558	10487	560	10499	557
10501	559	10513	558	10529	559	10531	562	10559	561	10567	564
10589	563	10597	563	10601	564	10607	564	10613	563	10627	564
10631	557	10639	563	10651	560	10657	565	10663	567	10667	561
10687	566	10691	566	10709	562	10711	564	10723	568	10729	566
10733	569	10739	569	10753	572	10771	563	10781	565	10789	568
10799	568	10831	568	10837	566	10847	572	10853	567	10859	569
10861	576	10867	567	10883	570	10889	569	10891	572	10903	574
10909	572	10937	575	10939	573	10949	567	10957	572	10973	575
10979	575	10987	574	10993	575	11003	576	11027	576	11047	570
11057	567	11059	573	11069	572	11071	574	11083	577	11087	585
11093	576	11113	579	11117	577	11119	573	11131	582	11149	582
11159	578	11161	575	11171	583	11173	575	11177	576	11197	579
11213	583	11239	580	11243	581	11251	577	11257	586	11261	579
11273	584	11279	584	11287	585	11299	575	11311	584	11317	585
11321	584	11329	593	11351	584	11353	587	11369	585	11383	580
11393	588	11399	585	11411	580	11423	587	11437	588	11443	586
11447	587	11467	587	11471	583	11483	586	11489	584	11491	585
11497	586	11503	587	11519	590	11527	588	11549	588	11551	590
11579	592	11587	592	11593	592	11597	597	11617	583	11621	591
11633	596	11657	590	11677	595	11681	592	11689	596	11699	597
11701	597	11717	592	11719	594	11731	596	11743	594	11777	593
11779	596	11783	597	11789	595	11801	600	11807	598	11813	595
11821	593	11827	599	11831	603	11833	596	11839	595	11863	597
11867	596	11887	604	11897	600	11903	599	11909	600	11923	600
11927	602	11933	601	11939	599	11941	607	11953	602	11959	602
11969	600	11971	601	11981	597	11987	602	12007	599	12011	607
12037	599	12041	601	12043	603	12049	603	12071	606	12073	607
12097	605	12101	605	12107	607	12109	604	12113	605	12119	610
12143	605	12149	607	12157	608	12161	602	12163	600	12197	602
12203	605	12211	608	12227	611	12239	605	12241	607	12251	613
12253	609	12263	609	12269	607	12277	608	12281	606	12289	611

Table 1 Continue 7

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	$\bar{t}_2 y$	q	t_2^R
12301	613	12323	608	12329	607	12343	616	12347	609	12373	619
12377	613	12379	611	12391	617	12401	612	12409	610	12413	613
12421	612	12433	610	12437	613	12451	616	12457	608	12473	618
12479	612	12487	617	12491	614	12497	620	12503	617	12511	618
12517	614	12527	616	12539	622	12541	620	12547	617	12553	617
12569	624	12577	612	12583	618	12589	618	12601	622	12611	619
12613	621	12619	619	12637	622	12641	622	12647	628	12653	618
12659	617	12671	623	12689	627	12697	623	12703	618	12713	620
12721	616	12739	620	12743	623	12757	629	12763	622	12781	625
12791	625	12799	625	12809	625	12821	625	12823	618	12829	623
12841	619	12853	623	12889	624	12893	626	12899	627	12907	624
12911	625	12917	630	12919	628	12923	626	12941	622	12953	622
12959	633	12967	628	12973	628	12979	630	12983	630	13001	626
13003	633	13007	632	13009	631	13033	635	13037	633	13043	630
13049	634	13063	632	13093	628	13099	627	13103	627	13109	634
13121	629	13127	636	13147	632	13151	635	13159	628	13163	639
13171	636	13177	633	13183	632	13187	629	13217	638	13219	637
13229	639	13241	633	13249	635	13259	633	13267	636	13291	635
13297	635	13309	638	13313	637	13327	637	13331	643	13337	643
13339	638	13367	638	13381	639	13397	641	13399	642	13411	639
13417	636	13421	642	13441	636	13451	642	13457	642	13463	637
13469	641	13477	646	13487	643	13499	636	13513	647	13523	641
13537	645	13553	645	13567	651	13577	646	13591	646	13597	650
13613	648	13619	645	13627	649	13633	648	13649	648	13669	644
13679	641	13681	648	13687	650	13691	646	13693	648	13697	650
13709	648	13711	653	13721	639	13723	651	13729	645	13751	646
13757	648	13759	652	13763	652	13781	652	13789	650	13799	654
13807	645	13829	648	13831	647	13841	650	13859	651	13873	654
13877	647	13879	655	13883	653	13901	650	13903	655	13907	651
13913	655	13921	647	13931	651	13933	654	13963	653	13967	651
13997	653	13999	657	14009	656	14011	652	14029	654	14033	659
14051	658	14057	656	14071	664	14081	659	14083	665	14087	658
14107	661	14143	661	14149	664	14153	658	14159	659	14173	658
14177	662	14197	662	14207	666	14221	663	14243	661	14249	661
14251	661	14281	661	14293	663	14303	666	14321	662	14323	663

Table 1 Continue 8

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
14327	660	14341	666	14347	667	14369	663	14387	664	14389	661
14401	664	14407	669	14411	665	14419	668	14423	670	14431	665
14437	668	14447	668	14449	670	14461	671	14479	667	14489	672
14503	667	14519	676	14533	671	14537	668	14543	666	14549	668
14551	665	14557	667	14561	668	14563	668	14591	674	14593	670
14621	672	14627	671	14629	675	14633	671	14639	672	14653	674
14657	676	14669	676	14683	666	14699	671	14713	672	14717	677
14723	676	14731	678	14737	675	14741	677	14747	678	14753	675
14759	674	14767	675	14771	677	14779	674	14783	676	14797	674
14813	673	14821	678	14827	674	14831	678	14843	671	14851	677
14867	683	14869	685	14879	679	14887	676	14891	675	14897	684
14923	677	14929	683	14939	679	14947	685	14951	681	14957	680
14969	682	14983	683	14983	683	15013	683	15017	684	15031	683
15053	684	15061	686	15073	686	15077	683	15083	682	15091	681
15101	687	15107	685	15121	685	15131	689	15137	687	15139	687
15149	687	15161	689	15173	688	15187	687	15193	684	15199	689
15217	680	15227	688	15233	689	15241	683	15259	685	15263	690
15269	684	15271	693	15277	685	15287	688	15289	686	15299	689
15307	687	15313	689	15319	692	15329	689	15331	686	15349	690
15359	685	15361	692	15373	687	15377	692	15383	691	15391	693
15401	688	15413	691	15427	690	15439	690	15443	694	15451	685
15461	689	15467	698	15473	686	15493	692	15497	687	15511	692
15527	696	15541	693	15551	696	15559	690	15569	698	15581	698
15583	694	15601	702	15607	694	15619	696	15629	700	15641	700
15643	696	15647	697	15649	694	15661	703	15667	692	15671	698
15679	705	15683	698	15727	703	15731	699	15733	697	15737	702
15739	698	15749	699	15761	699	15767	695	15773	697	15787	704
15791	695	15797	702	15803	703	15809	703	15817	696	15823	710
15859	698	15877	704	15881	705	15887	703	15889	707	15901	706
15907	706	15913	700	15919	702	15923	705	15937	711	15959	713
15971	704	15973	706	15991	706	16001	709	16007	708	16033	707
16057	708	16061	710	16063	708	16067	711	16069	708	16073	708
16087	714	16091	706	16097	706	16103	712	16111	709	16127	709
16139	713	16141	716	16183	707	16187	715	16189	713	16193	717
16217	716	16223	713	16229	711	16231	713	16249	714	16253	715

Table 1 Continue 9

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
16267	715	16273	708	16301	710	16319	719	16333	709	16339	713
16349	714	16361	718	16363	719	16369	715	16381	712	16411	717
16417	719	16421	717	16427	727	16433	717	16447	716	16451	716
16453	717	16477	714	16481	722	16487	721	16493	714	16519	719
16529	719	16547	719	16553	722	16561	723	16567	717	16573	722
16603	717	16607	720	16619	718	16631	716	16633	719	16649	718
16651	722	16657	720	16661	724	16673	725	16691	719	16693	725
16699	720	16703	730	16729	722	16741	722	16747	723	16759	728
16763	731	16787	724	16811	724	16823	722	16829	723	16831	723
16843	729	16871	721	16879	726	16883	730	16889	733	16901	729
16903	733	16921	729	16927	727	16931	726	16937	724	16943	734
16963	735	16979	733	16981	729	16987	727	16993	728	17011	730
17021	727	17027	732	17029	735	17033	727	17041	734	17047	732
17053	734	17077	730	17093	737	17099	733	17107	731	17117	732
17123	735	17137	732	17159	729	17167	736	17183	737	17189	737
17191	740	17203	737	17207	732	17209	733	17231	732	17239	733
17257	738	17291	733	17293	744	17299	734	17317	734	17321	737
17327	739	17333	737	17341	740	17351	737	17359	740	17377	740
17383	738	17387	740	17389	739	17393	734	17401	742	17417	736
17419	744	17431	743	17443	741	17449	739	17467	743	17471	741
17477	737	17483	745	17489	746	17491	740	17497	742	17509	743
17519	743	17539	744	17551	741	17569	740	17573	740	17579	748
17581	745	17597	745	17599	744	17609	744	17623	741	17627	740
17657	750	17659	747	17669	748	17681	747	17683	745	17707	751
17713	747	17729	751	17737	745	17747	749	17749	751	17761	747
17783	749	17789	744	17791	749	17807	755	17827	747	17837	755
17839	756	17851	750	17863	749	17881	753	17891	752	17903	753
17909	751	17911	749	17921	752	17923	745	17929	755	17939	749
17957	754	17959	754	17971	753	17977	755	17981	747	17987	754
17989	752	18013	750	18041	750	18043	753	18047	756	18049	756
18059	760	18061	756	18077	754	18089	754	18097	759	18119	758
18121	758	18127	756	18131	759	18133	758	18143	754	18149	758
18169	758	18181	758	18191	762	18199	750	18211	754	18217	766
18223	763	18229	760	18233	758	18251	763	18253	762	18257	759
18269	759	18287	760	18289	763	18301	758	18307	762	18311	768

Table 1 Continue 10

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
18313	761	18329	762	18341	758	18353	768	18367	765	18371	765
18379	763	18397	762	18401	760	18413	759	18427	764	18433	764
18439	772	18443	764	18451	768	18457	765	18461	772	18481	762
18493	770	18503	767	18517	767	18521	767	18523	768	18539	768
18541	770	18553	767	18583	768	18587	767	18593	769	18617	764
18637	774	18661	772	18671	766	18679	772	18691	778	18701	774
18713	774	18719	770	18731	769	18743	772	18749	766	18757	765
18773	763	18787	767	18793	775	18797	780	18803	773	18839	771
18859	778	18869	774	18899	777	18911	772	18913	778	18917	778
18919	773	18947	778	18959	777	18973	773	18979	780	19001	776
19009	774	19013	773	19031	778	19037	778	19051	779	19069	780
19073	783	19079	782	19081	779	19087	778	19121	774	19139	778
19141	783	19157	778	19163	783	19181	778	19183	783	19207	776
19211	784	19213	783	19219	784	19231	780	19237	787	19249	777
19259	784	19267	786	19273	787	19289	780	19301	785	19309	779
19319	787	19333	791	19373	784	19379	781	19381	783	19387	790
19391	790	19403	785	19417	783	19421	792	19423	781	19427	787
19429	786	19433	786	19441	787	19447	784	19457	794	19463	785
19469	785	19471	794	19477	790	19483	795	19489	787	19501	792
19507	785	19531	792	19541	784	19543	789	19553	791	19559	792
19571	792	19577	793	19583	794	19597	793	19603	794	19609	790
19661	793	19681	795	19687	797	19697	791	19699	799	19709	793
19717	798	19727	800	19739	795	19751	787	19753	790	19759	790
19763	795	19777	799	19793	797	19801	792	19813	793	19819	795
19841	795	19843	794	19853	796	19861	797	19867	800	19889	799
19891	799	19913	791	19919	796	19927	796	19937	798	19949	799
19961	797	19963	802	19973	799	19979	797	19991	800	19993	804
19997	795	19997	796	20011	804	20021	800	20023	795	20029	806
20047	797	20051	801	20063	801	20071	801	20089	796	20101	801
20107	806	20113	798	20117	794	20123	804	20129	796	20143	802
20147	796	20149	811	20161	804	20173	808	20177	805	20183	804
20201	800	20219	805	20231	803	20233	800	20249	806	20261	802
20269	810	20287	807	20297	804	20323	810	20327	809	20333	810
20341	811	20347	805	20353	808	20357	810	20359	811	20369	810
20389	807	20393	806	20399	810	20407	808	20411	810	20431	808

Table 1 Continue 11

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
20441	808	20443	806	20477	808	20479	815	20483	807	20507	807
20509	813	20521	810	20533	815	20543	815	20549	812	20551	814
20563	813	20593	813	20599	815	20611	816	20627	814	20639	812
20641	819	20663	813	20681	819	20693	811	20707	812	20717	814
20719	812	20731	818	20743	819	20747	817	20749	811	20753	815
20759	815	20771	818	20773	819	20789	816	20807	817	20809	812
20849	817	20857	821	20873	822	20879	820	20887	819	20897	824
20899	818	20903	821	20921	815	20929	822	20939	819	20947	824
20959	822	20963	827	20981	823	20983	823	21001	822	21011	820
21013	816	21017	820	21019	823	21023	817	21031	825	21059	826
21061	824	21067	825	21089	822	21101	823	21107	818	21121	823
21139	832	21143	819	21149	822	21157	820	21163	824	21169	825
21179	819	21187	823	21191	824	21193	826	21211	828	21221	830
21227	828	21247	831	21269	830	21277	829	21283	828	21313	827
21317	826	21319	825	21323	831	21341	828	21347	833	21377	834
21379	833	21383	825	21391	830	21397	823	21401	827	21407	825
21419	833	21433	831	21467	825	21481	829	21487	836	21491	826
21493	834	21499	830	21503	830	21517	823	21521	829	21523	836
21529	831	21557	829	21559	832	21563	832	21569	833	21577	835
21587	836	21589	836	21599	837	21601	831	21611	838	21613	835
21617	837	21647	845	21649	835	21661	836	21673	834	21683	832
21701	835	21713	844	21727	834	21737	831	21739	837	21751	838
21757	836	21767	835	21773	835	21787	843	21799	840	21803	838
21817	838	21821	836	21839	848	21841	847	21851	839	21859	837
21863	845	21871	841	21881	838	21893	839	21911	838	21929	836
21937	842	21943	841	21961	837	21977	843	21991	850	21997	842
22003	846	22013	844	22027	846	22031	845	22037	845	22039	846
22051	841	22063	842	22067	842	22073	841	22079	846	22091	843
22093	846	22109	841	22111	851	22123	847	22129	842	22133	842
22147	846	22153	845	22157	846	22159	849	22171	850	22189	848
22193	844	22229	854	22247	848	22259	849	22271	847	22273	843
22277	852	22279	854	22283	845	22291	847	22303	852	22307	851
22343	848	22349	853	22367	849	22369	848	22381	851	22391	852
22397	854	22409	846	22433	859	22441	849	22447	855	22453	852
22469	852	22481	857	22483	846	22501	854	22511	852	22531	856

Table 1 Continue 12

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
22541	853	22543	856	22549	857	22567	858	22571	859	22573	856
22613	853	22619	854	22621	857	22637	858	22639	857	22643	853
22651	855	22669	863	22679	857	22691	864	22697	859	22699	860
22709	857	22717	856	22721	852	22727	856	22739	858	22741	864
22751	856	22769	853	22777	863	22783	853	22787	856	22807	857
22811	868	22817	861	22853	858	22859	856	22861	859	22871	866
22877	866	22901	857	22907	863	22921	867	22937	859	22943	866
22961	855	22963	862	22973	866	22993	862	23003	861	23011	859
23017	864	23021	862	23027	865	23029	862	23039	866	23041	867
23053	865	23057	870	23059	864	23063	862	23071	868	23081	871
23087	870	23099	863	23117	864	23131	860	23143	868	23159	876
23167	872	23173	867	23189	864	23197	875	23201	867	23203	870
23209	862	23227	863	23251	862	23269	869	23279	871	23291	868
23293	865	23297	873	23311	866	23321	871	23327	867	23333	872
23339	872	23357	872	23369	874	23371	868	23399	876	23417	872
23431	875	23447	880	23459	875	23473	877	23497	875	23509	875
23531	874	23537	877	23539	880	23549	876	23557	877	23561	881
23563	871	23567	877	23581	871	23593	879	23599	884	23603	878
23609	878	23623	882	23627	875	23629	877	23633	875	23663	878
23669	878	23671	879	23677	878	23687	876	23689	882	23719	883
23741	875	23743	883	23747	881	23753	874	23761	879	23767	883
23773	885	23789	885	23801	882	23813	881	23819	881	23827	879
23831	879	23833	882	23857	885	23869	877	23873	882	23879	879
23887	884	23893	888	23899	886	23909	880	23911	884	23917	882
23929	881	23957	887	23971	889	23977	884	23981	883	23993	879
24001	885	24007	881	24019	887	24023	884	24029	885	24043	891
24049	890	24061	881	24071	889	24077	883	24083	886	24091	881
24097	884	24103	883	24107	886	24109	881	24113	889	24121	884
24133	886	24137	892	24151	891	24169	888	24179	886	24181	891
24197	889	24203	891	24223	891	24229	888	24239	895	24247	889
24251	895	24281	896	24317	892	24329	890	24337	891	24359	887
24371	892	24373	898	24379	893	24391	890	24407	896	24413	896
24419	896	24421	899	24439	895	24443	896	24469	891	24473	895
24481	896	24499	895	24509	899	24517	899	24527	897	24533	895
24547	901	24551	898	24571	901	24593	891	24611	902	24623	900

Table 1 Continue 13

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
24631	888	24659	901	24671	896	24677	899	24683	898	24691	904
24697	899	24709	903	24733	899	24749	895	24763	894	24767	897
24781	900	24793	906	24799	896	24809	901	24821	904	24841	903
24847	908	24851	901	24859	907	24877	906	24889	910	24907	902
24917	902	24919	905	24923	902	24943	905	24953	903	24967	903
24971	903	24977	905	24979	905	24989	901	24989	911	25013	907
25031	909	25033	900	25037	908	25057	901	25073	905	25087	910
25097	908	25111	904	25117	899	25121	909	25127	908	25147	911
25153	905	25163	918	25169	906	25171	918	25183	906	25189	905
25219	912	25229	910	25237	908	25243	917	25247	923	25253	903
25261	913	25301	911	25303	905	25307	916	25309	915	25321	907
25339	909	25343	915	25349	905	25357	917	25367	914	25373	908
25391	915	25409	905	25411	914	25423	909	25439	912	25447	905
25453	913	25457	922	25463	901	25469	914	25471	909	25523	911
25537	913	25541	915	25561	917	25577	912	25579	920	25583	918
25589	918	25601	917	25603	915	25609	918	25621	919	25633	923
25639	913	25643	923	25657	915	25667	919	25673	918	25679	925
25693	913	25703	917	25717	914	25733	913	25741	913	25747	925
25759	925	25763	921	25771	919	25793	921	25799	920	25801	929
25819	914	25841	919	25847	920	25849	918	25867	918	25873	918
25889	920	25903	919	25913	927	25919	924	25931	920	25933	919
25939	921	25943	929	25951	927	25969	929	25981	921	25997	924
25999	917	26003	928	26017	923	26021	927	26029	927	26041	915
26053	921	26083	926	26099	924	26107	932	26111	927	26113	928
26119	932	26141	923	26153	930	26161	929	26171	929	26177	930
26183	930	26189	929	26203	929	26209	932	26227	926	26237	930
26249	935	26251	929	26261	930	26263	938	26267	927	26293	934
26297	930	26309	930	26317	930	26321	930	26339	929	26347	928
26357	934	26371	924	26387	929	26393	932	26399	928	26407	927
26417	934	26423	935	26431	929	26437	929	26449	936	26459	925
26479	937	26489	933	26497	939	26501	932	26513	934	26539	931
26557	933	26561	941	26573	936	26591	935	26597	939	26627	934
26633	936	26641	939	26647	936	26669	938	26681	939	26683	934
26687	940	26693	936	26699	937	26701	944	26711	938	26713	932
26717	937	26723	936	26729	936	26731	940	26737	936	26759	934

Table 1 Continue 14

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
26777	935	26783	935	26801	939	26813	939	26821	945	26833	937
26839	944	26849	936	26861	937	26863	943	26879	940	26881	942
26891	947	26893	946	26903	937	26921	941	26927	940	26947	947
26951	942	26953	939	26959	941	26981	940	26987	942	26993	940
27011	954	27017	942	27031	945	27043	951	27059	944	27061	942
27067	944	27073	950	27077	939	27091	944	27103	945	27107	949
27109	945	27127	949	27143	944	27179	946	27191	945	27197	950
27211	953	27239	953	27241	949	27253	954	27259	949	27271	947
27277	949	27281	953	27283	951	27299	953	27329	951	27337	957
27361	946	27367	950	27397	956	27407	949	27409	949	27427	955
27431	962	27437	954	27449	955	27457	947	27479	952	27481	958
27487	952	27509	956	27527	946	27529	955	27539	960	27541	963
27551	949	27581	957	27583	960	27611	957	27617	963	27631	958
27647	959	27653	953	27673	953	27689	955	27691	959	27697	957
27701	967	27733	960	27737	962	27739	953	27743	953	27749	961
27751	957	27763	960	27767	963	27773	963	27779	961	27791	955
27793	960	27799	961	27803	957	27809	953	27817	962	27823	962
27827	957	27847	955	27851	964	27883	961	27893	971	27901	961
27917	959	27919	966	27941	963	27943	959	27947	965	27953	967
27961	968	27967	961	27983	958	27997	963	28001	959	28019	966
28027	965	28031	964	28051	963	28057	967	28069	967	28081	970
28087	975	28097	961	28099	964	28109	967	28111	965	28123	963
28151	963	28163	961	28181	965	28183	967	28201	974	28211	972
28219	970	28229	965	28277	966	28279	968	28283	965	28289	967
28297	967	28307	974	28309	969	28319	968	28349	972	28351	969
28387	973	28393	979	28403	971	28409	968	28411	962	28429	975
28433	971	28439	971	28447	969	28463	969	28477	970	28493	975
28499	974	28513	977	28517	982	28537	967	28541	971	28547	968
28549	966	28559	972	28571	977	28573	969	28579	975	28591	979
28597	979	28603	973	28607	983	28619	974	28621	978	28627	973
28631	974	28643	965	28649	977	28657	976	28661	980	28663	976
28669	977	28687	968	28697	973	28703	978	28711	977	28723	974
28729	981	28751	980	28753	978	28759	979	28771	977	28789	980
28793	973	28807	971	28813	976	28817	988	28837	981	28843	980
28859	988	28867	979	28871	979	28879	972	28901	977	28909	983

Table 1 Continue 15

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
28921	980	28927	978	28933	982	28949	976	28961	985	28979	982
29009	988	29017	985	29021	981	29023	980	29027	978	29033	980
29059	983	29063	980	29077	989	29101	985	29123	986	29129	985
29131	984	29137	993	29147	988	29153	987	29167	987	29173	989
29179	988	29191	982	29201	996	29207	983	29209	992	29221	986
29231	985	29243	985	29251	991	29269	985	29287	986	29297	989
29303	998	29311	994	29327	990	29333	985	29339	986	29347	989
29363	993	29383	993	29387	986	29389	988	29399	990	29401	986
29411	996	29423	990	29429	986	29437	989	29443	991	29453	991
29473	986	29483	994	29501	991	29527	995	29531	989	29537	988
29567	996	29569	991	29573	995	29581	996	29587	993	29599	999
29611	990	29629	992	29633	993	29641	992	29663	992	29669	1002
29671	995	29683	995	29717	996	29723	991	29741	994	29753	997
29759	993	29761	994	29789	993	29803	998	29819	993	29833	996
29837	998	29851	998	29863	1005	29867	1001	29873	997	29879	992
29881	998	29917	1001	29921	996	29927	1000	29947	1001	29959	1006
29983	1000	29989	999	29989	997	30011	999	30013	999	30029	1001
30047	999	30059	1002	30071	1008	30089	1001	30091	1001	30097	1004
30103	1006	30109	1004	30113	1007	30119	996	30133	1006	30137	1007
30139	1005	30161	1004	30169	1009	30181	1001	30187	1010	30197	1002
30203	1007	30211	1007	30223	1006	30241	1006	30253	1003	30259	1012
30269	1012	30271	1006	30293	1015	30307	997	30313	1003	30319	1004
30323	1006	30341	1011	30347	1000	30367	1006	30389	1007	30391	1012
30403	1004	30427	1005	30431	1014	30449	1008	30467	1004	30469	1009
30491	1010	30493	1013	30497	1010	30509	1005	30517	1007	30529	1011
30539	1012	30553	1009	30557	1008	30559	1011	30577	1015	30593	1015
30631	1015	30637	1013	30643	1019	30649	1014	30661	1018	30671	1011
30677	1009	30689	1014	30697	1019	30703	1016	30707	1011	30713	1014
30727	1007	30757	1021	30763	1016	30773	1014	30781	1016	30803	1017
30809	1011	30817	1013	30829	1013	30839	1015	30841	1019	30851	1015
30853	1016	30859	1021	30869	1013	30871	1019	30881	1013	30893	1018
30911	1015	30931	1008	30937	1014	30941	1015	30949	1019	30971	1019
30977	1018	30983	1018	31013	1018	31019	1017	31033	1015	31039	1026
31051	1019	31063	1023	31069	1018	31079	1024	31081	1018	31091	1013
31121	1017	31123	1017	31139	1024	31147	1020	31151	1028	31153	1020

Table 1 Continue 16

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
31159	1021	31177	1026	31181	1020	31183	1022	31189	1017	31193	1026
31219	1025	31223	1021	31231	1018	31237	1027	31247	1024	31249	1019
31253	1023	31259	1025	31267	1026	31271	1022	31277	1018	31307	1028
31319	1020	31321	1027	31327	1030	31333	1030	31337	1024	31357	1028
31379	1032	31387	1019	31391	1031	31393	1031	31397	1030	31469	1025
31477	1023	31481	1031	31489	1028	31511	1028	31513	1029	31517	1033
31531	1024	31541	1031	31543	1028	31547	1025	31567	1024	31573	1030
31583	1035	31601	1030	31607	1026	31627	1035	31643	1036	31649	1030
31657	1030	31663	1031	31667	1027	31687	1027	31699	1034	31721	1023
31723	1033	31727	1032	31729	1035	31741	1029	31751	1029	31769	1033
31771	1037	31793	1034	31799	1035	31817	1032	31847	1037	31849	1034
31859	1038	31873	1035	31883	1032	31891	1032	31907	1033	31957	1038
31963	1036	31973	1031	31981	1036	31991	1039	32003	1041	32009	1041
32027	1036	32029	1043	32051	1040	32057	1034	32059	1043	32063	1034
32069	1041	32077	1036	32083	1039	32089	1038	32099	1037	32117	1036
32119	1040	32141	1040	32143	1036	32159	1042	32173	1036	32183	1043
32189	1040	32191	1034	32203	1035	32213	1043	32233	1038	32237	1040
32251	1045	32257	1038	32261	1040	32297	1046	32299	1043	32303	1041
32309	1040	32321	1044	32323	1039	32327	1034	32341	1049	32353	1039
32359	1043	32363	1040	32369	1042	32371	1051	32377	1044	32381	1040
32401	1048	32411	1046	32413	1040	32423	1044	32429	1044	32441	1044
32443	1040	32467	1053	32479	1045	32491	1044	32497	1046	32503	1041
32507	1041	32531	1043	32533	1045	32537	1054	32561	1045	32563	1047
32569	1045	32573	1053	32579	1049	32587	1049	32603	1042	32609	1049
32611	1050	32621	1051	32633	1048	32647	1048	32653	1053	32687	1054
32693	1047	32707	1053	32713	1053	32717	1050	32719	1047	32749	1053
32771	1047	32779	1048	32783	1054	32789	1056	32797	1054	32801	1050
32803	1051	32831	1055	32833	1050	32839	1051	32843	1050	32869	1054
32887	1045	32909	1045	32911	1055	32917	1048	32933	1057	32939	1063
32941	1050	32957	1055	32969	1053	32971	1044	32983	1049	32987	1051
32993	1047	32999	1058	32999	1058	33013	1053	33023	1054	33029	1052
33037	1055	33049	1058	33053	1052	33071	1060	33073	1055	33083	1059
33091	1053	33107	1056	33113	1063	33119	1059	33149	1055	33151	1059
33161	1064	33179	1058	33181	1061	33191	1060	33199	1047	33203	1062
33211	1063	33223	1063	33247	1057	33287	1062	33289	1063	33301	1058

Table 1 Continue 17

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
33311	1064	33317	1057	33329	1064	33331	1058	33343	1056	33347	1064
33349	1053	33353	1061	33359	1065	33377	1067	33391	1063	33403	1059
33409	1058	33413	1062	33427	1065	33457	1061	33461	1062	33469	1058
33479	1063	33487	1060	33493	1074	33503	1064	33521	1059	33529	1068
33533	1063	33547	1058	33563	1067	33569	1069	33577	1071	33581	1065
33587	1073	33589	1064	33599	1063	33601	1070	33613	1071	33617	1069
33619	1061	33623	1069	33629	1069	33637	1069	33641	1068	33647	1067
33679	1067	33703	1067	33713	1064	33721	1064	33739	1067	33749	1066
33751	1065	33757	1067	33767	1065	33769	1066	33773	1066	33791	1070
33797	1072	33809	1069	33811	1071	33827	1068	33829	1064	33851	1072
33857	1070	33863	1074	33871	1068	33889	1071	33893	1077	33911	1072
33923	1071	33931	1069	33937	1062	33941	1067	33961	1077	33967	1078
33997	1066	34019	1076	34031	1075	34033	1079	34039	1075	34057	1065
34061	1077	34123	1078	34127	1071	34129	1073	34141	1075	34147	1075
34157	1074	34159	1077	34171	1076	34183	1069	34211	1073	34213	1071
34217	1078	34231	1075	34253	1070	34259	1087	34261	1076	34267	1083
34273	1079	34283	1076	34297	1077	34301	1075	34303	1077	34313	1077
34319	1076	34327	1068	34337	1080	34351	1078	34361	1076	34367	1082
34369	1081	34381	1078	34403	1077	34421	1081	34429	1083	34439	1077
34457	1084	34469	1082	34471	1077	34483	1077	34487	1076	34499	1085
34501	1081	34511	1078	34513	1079	34519	1087	34537	1082	34543	1077
34549	1082	34583	1087	34589	1084	34591	1083	34603	1079	34607	1088
34613	1079	34631	1087	34649	1084	34651	1085	34667	1087	34673	1080
34679	1080	34687	1087	34693	1083	34703	1085	34721	1088	34729	1086
34739	1087	34747	1086	34757	1082	34759	1082	34763	1085	34781	1085
34807	1090	34819	1083	34841	1095	34843	1087	34847	1079	34849	1084
34871	1082	34877	1090	34883	1089	34897	1097	34913	1096	34919	1090
34939	1090	34949	1088	34961	1093	34963	1087	34981	1083	35023	1092
35027	1093	35051	1095	35053	1083	35059	1094	35069	1087	35081	1090
35083	1097	35089	1092	35099	1088	35107	1099	35111	1090	35117	1089
35129	1093	35141	1088	35149	1091	35153	1083	35159	1096	35171	1097
35201	1096	35221	1094	35227	1098	35251	1094	35257	1091	35267	1091
35279	1094	35281	1094	35291	1098	35311	1092	35317	1101	35323	1094
35327	1094	35339	1093	35353	1097	35363	1094	35381	1094	35393	1103
35401	1096	35407	1101	35419	1096	35423	1094	35437	1103	35447	1099

Table 1 Continue 18

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
35449	1096	35461	1095	35491	1094	35507	1098	35509	1097	35521	1096
35527	1098	35531	1095	35533	1099	35537	1093	35543	1097	35569	1104
35573	1102	35591	1108	35593	1104	35597	1102	35603	1100	35617	1099
35671	1105	35677	1096	35729	1108	35731	1099	35747	1107	35753	1111
35759	1102	35771	1099	35797	1111	35801	1099	35803	1111	35809	1104
35831	1106	35837	1107	35839	1100	35851	1105	35863	1103	35869	1100
35879	1100	35897	1104	35899	1099	35911	1098	35923	1106	35933	1113
35951	1111	35963	1113	35969	1099	35977	1103	35983	1101	35993	1107
35999	1109	35999	1110	36007	1107	36011	1102	36013	1108	36017	1112
36037	1105	36061	1103	36067	1112	36073	1113	36083	1105	36097	1103
36107	1104	36109	1109	36131	1104	36137	1099	36151	1104	36161	1107
36187	1108	36191	1111	36209	1108	36217	1113	36229	1112	36241	1111
36251	1118	36263	1111	36269	1111	36277	1111	36293	1113	36299	1113
36307	1107	36313	1108	36319	1107	36341	1111	36343	1109	36353	1112
36373	1110	36383	1109	36389	1113	36433	1113	36451	1111	36457	1118
36467	1113	36469	1111	36473	1116	36479	1109	36493	1112	36497	1120
36523	1113	36527	1122	36529	1116	36541	1118	36551	1114	36559	1113
36563	1118	36571	1117	36583	1116	36587	1120	36599	1114	36607	1124
36629	1116	36637	1116	36643	1115	36653	1117	36671	1117	36677	1122
36683	1119	36691	1114	36697	1121	36709	1122	36713	1114	36721	1124
36739	1121	36749	1116	36761	1115	36767	1119	36779	1116	36781	1123
36787	1117	36791	1124	36793	1124	36809	1118	36821	1116	36833	1126
36847	1122	36857	1117	36871	1116	36877	1116	36887	1123	36899	1119
36901	1128	36913	1122	36919	1122	36923	1129	36929	1124	36931	1121
36943	1124	36947	1127	36973	1116	36979	1124	36997	1127	37003	1123
37013	1125	37019	1121	37021	1117	37039	1127	37049	1121	37057	1115
37061	1127	37087	1127	37097	1123	37117	1126	37123	1129	37139	1132
37159	1130	37171	1128	37181	1130	37189	1125	37199	1132	37201	1131
37217	1128	37223	1134	37243	1116	37253	1129	37273	1127	37277	1126
37307	1124	37309	1132	37313	1127	37321	1127	37337	1133	37339	1127
37357	1133	37361	1130	37363	1127	37369	1128	37379	1131	37397	1136
37409	1126	37423	1137	37441	1125	37447	1135	37463	1129	37483	1132
37489	1128	37493	1136	37501	1127	37507	1129	37511	1137	37517	1141
37529	1131	37537	1134	37547	1131	37549	1133	37561	1137	37567	1138
37571	1131	37573	1138	37579	1139	37589	1131	37591	1136	37607	1136

Table 1 Continue 19

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R
37619	1128	37633	1132	37643	1137	37649	1133	37657	1133	37663	1129
37691	1130	37693	1131	37699	1132	37717	1135	37747	1142	37781	1135
37783	1147	37799	1135	37811	1139	37813	1138	37831	1142	37847	1142
37853	1138	37861	1139	37871	1139	37879	1144	37889	1134	37897	1139
37907	1138	37951	1131	37957	1135	37963	1137	37967	1143	37987	1128
37991	1136	37993	1151	37997	1137	38011	1136	38039	1139	38047	1142
38053	1141	38069	1146	38083	1144	38113	1141	38119	1139	38149	1139
38153	1138	38167	1152	38177	1140	38183	1143	38189	1147	38197	1146
38201	1147	38219	1138	38231	1145	38237	1139	38239	1141	38261	1142
38273	1138	38281	1146	38287	1146	38299	1148	38303	1139	38317	1145
38321	1145	38327	1148	38329	1145	38333	1144	38351	1149	38371	1142
38377	1143	38393	1149	38431	1149	38447	1151	38449	1150	38453	1148
38459	1145	38461	1155	38501	1145	38543	1139	38557	1145	38561	1150
38567	1148	38569	1145	38593	1146	38603	1148	38609	1153	38611	1150
38629	1148	38639	1148	38651	1154	38653	1147	38669	1155	38671	1142
38677	1148	38693	1155	38699	1148	38707	1157	38711	1144	38713	1152
38723	1153	38729	1151	38737	1148	38747	1154	38749	1147	38767	1153
38783	1151	38791	1154	38803	1153	38821	1149	38833	1152	38839	1152
38851	1159	38861	1156	38867	1157	38873	1146	38891	1157	38903	1158
38917	1164	38921	1146	38923	1152	38933	1160	38953	1158	38959	1152
38971	1156	38977	1157	38993	1159	39019	1153	39023	1159	39041	1155
39043	1163	39047	1157	39079	1158	39089	1158	39097	1155	39103	1160
39107	1152	39113	1163	39119	1162	39133	1160	39139	1158	39157	1153
39161	1161	39163	1158	39181	1153	39191	1166	39199	1156	39209	1158
39217	1155	39227	1168	39229	1156	39233	1162	39239	1162	39241	1158
39251	1160	39293	1156	39301	1164	39313	1166	39317	1160	39323	1159
39341	1163	39343	1163	39359	1164	39367	1160	39371	1159	39373	1162
39383	1160	39397	1161	39409	1160	39419	1156	39439	1158	39443	1162
39451	1167	39461	1171	39499	1169	39503	1163	39509	1158	39511	1168
39521	1163	39541	1168	39551	1174	39563	1161	39569	1164	39581	1161
39607	1167	39619	1167	39623	1158	39631	1166	39659	1161	39667	1162
39671	1159	39679	1174	39703	1172	39709	1164	39719	1167	39727	1170
39733	1170	39749	1174	39761	1166	39769	1173	39779	1168	39791	1176
39799	1170	39821	1164	39827	1171	39829	1171	39839	1171	39841	1169
39847	1174	39857	1174	39863	1165	39869	1177	39877	1167	39883	1165

Table 1 Continue 20

q	t_2^R	q	t_2^R	q	t_2^R	q	$\bar{t}_2 y$	q	t_2^R	q	t_2^R
39887	1173	39901	1181	39929	1175	39937	1165	39953	1173	39971	1178
39979	1169	39983	1180	39989	1169	39989	1172	40009	1173	40013	1179
40031	1179	40037	1167	40039	1166	40063	1177	40087	1164	40093	1174
40099	1174	40111	1170	40123	1169	40127	1176	40129	1174	40151	1172
40153	1185	40163	1174	40169	1172	40177	1166	40189	1173	40193	1172
40213	1173	40231	1173	40237	1173	40241	1181	40253	1173	40277	1176
40283	1181	40289	1185	40343	1175	40351	1180	40357	1184	40361	1178
40387	1183	40423	1176	40427	1176	40429	1183	40433	1177	40459	1179
40471	1181	40483	1173	40487	1179	40493	1178	40499	1177	40507	1182
40519	1186	40529	1182	40531	1177	40543	1182	40559	1184	40577	1174
40583	1179	40591	1185	40597	1185	40609	1183	40627	1183	40637	1180
40639	1182	40693	1183	40697	1186	40699	1187	40709	1185	40739	1176
40751	1184	40759	1185	40763	1192	40771	1191	40787	1186	40801	1191
40813	1181	40819	1182	40823	1179	40829	1192	40841	1185	40847	1188
40849	1179	40853	1186	40867	1186	40879	1183	40883	1191	40897	1189
40903	1184	40927	1185	40933	1188	40939	1190	40949	1191	40961	1189
40973	1189	40993	1197	41011	1189	41017	1193	41023	1188	41039	1183
41047	1188	41051	1192	41057	1191	41077	1186	41081	1191	41113	1188
41117	1193	41131	1189	41141	1192	41143	1188	41149	1189	41161	1195
41177	1192	41179	1194	41183	1197	41189	1200	41201	1186	41203	1193
41213	1194	41221	1194	41227	1190	41231	1199	41233	1195	41243	1196
41257	1185	41263	1204	41269	1203	41281	1194	41299	1185	41333	1201
41341	1196	41351	1196	41357	1199	41381	1191	41387	1192	41389	1193
41399	1209	41411	1201	41413	1202	41443	1195	41453	1190	41467	1192
41479	1202	41491	1197	41507	1200	41513	1191	41519	1196	41521	1198
41539	1197	41543	1206	41549	1204	41579	1200	41593	1203	41597	1193
41603	1202	41609	1201	41611	1199	41617	1199	41621	1196	41627	1196
41641	1202	41647	1195	41651	1197	41659	1198	41669	1199	41681	1196
41687	1199	41719	1202	41729	1204	41737	1199	41759	1199	41761	1207
41771	1192	41777	1200	41801	1201	41809	1201	41813	1199	41843	1203
41849	1200	41851	1209	41863	1203	41879	1206	41887	1200	41893	1206
41897	1199	41903	1204	41911	1199	41927	1202	41941	1203	41947	1203
41953	1205	41957	1204	41959	1213	41969	1197	41981	1207	41983	1203
41999	1208	42013	1208	42017	1204	42019	1209	42023	1212	42043	1201
42061	1208	42071	1207	42073	1211	42083	1200	42089	1200	42101	1194

Table 1 Continue 21

q	t_2^R	q	t_2^R	q	t_2^R	q	t_2^R	q	$\bar{t}_2 y$	q	t_2^R
42131	1206	42139	1214	42157	1198	42169	1214	42179	1206	42181	1213
42187	1208	42193	1205	42197	1204	42209	1205	42221	1205	42223	1205
42227	1210	42239	1209	42257	1215	42281	1212	42283	1216	42293	1198
42299	1214	42307	1210	42323	1205	42331	1209	42337	1204	42349	1205
42359	1207	42373	1214	42379	1218	42391	1211	42397	1214	42403	1207
42407	1213	42409	1205	42433	1207	42437	1212	42443	1207	42451	1206
42457	1205	42461	1215	42463	1217	42467	1214	42473	1210	42487	1213
42491	1207	42499	1211	42509	1212	42533	1211	42557	1211	42569	1214
42571	1209	42577	1207	42589	1210	42611	1211	42641	1222	42643	1217
42649	1209	42667	1220	42677	1217	42683	1210	42689	1213	42697	1221
42701	1219	42703	1213	42709	1220	42719	1221	42727	1216	42737	1212
42743	1220	42751	1212	42767	1221	42773	1216	42787	1213	42793	1215
42797	1224	42821	1214	42829	1216	42839	1220	42841	1221	42853	1220
42859	1219	42863	1211	42899	1223	42901	1215	42923	1222	42929	1206
42937	1214	42943	1210	42953	1213	42961	1218	42967	1226	42979	1217
42989	1226	43003	1217	43013	1223	43019	1222	43037	1217	43049	1223
43051	1220	43063	1225	43067	1219	43093	1222	43103	1222	43117	1226
43133	1221	43151	1225	43159	1223	43177	1224	43189	1218	43201	1222
43207	1220	43223	1222	43237	1220	43261	1215	43271	1221	43283	1219
43291	1221	43313	1224	43319	1232	43321	1230	43331	1221	43391	1226
43397	1227	43399	1224	43403	1225	43411	1223	43427	1219	43441	1228
43451	1230	43457	1229	43481	1223	43487	1231	43499	1229	43517	1223
43541	1226	43543	1231	43573	1230	43577	1227	43579	1231	43591	1222
43597	1233	43607	1231	43609	1227	43613	1232	43627	1229	43633	1231
43649	1222	43651	1231	43661	1229	43669	1236	43691	1239	43711	1226
43717	1227	43721	1231	43753	1223	43759	1226	43777	1229	43781	1228
43783	1227	43787	1237	43789	1230	43793	1231	43801	1231	43853	1232
43867	1234	43889	1231	43891	1234	43913	1227	43933	1234	43943	1231
43951	1229	43961	1244	43963	1233	43969	1230	43973	1228	43987	1235
43991	1242	43997	1238	44017	1229	44021	1243	44027	1236	44029	1231
44041	1235	44053	1235	44059	1242	44071	1228	44087	1240	44089	1228
44101	1231	44111	1237	44119	1236	44123	1240	44129	1244	44131	1239
44159	1237	44171	1241	44179	1234	44189	1235	44201	1229	44203	1237
44207	1245	44221	1238	44249	1240	44257	1233	44263	1239	44267	1239
44269	1245	44273	1238	44279	1246	44281	1242	44293	1238	44351	1240

Table 1 Continue 22

q	t_2^R	q	t_2^R	q	t_2^R	q	\bar{t}_2yy	q	t_2^R	q	t_2^R
44357	1248	44371	1239	44381	1246	44383	1238	44389	1240	44417	1239
44449	1241	44453	1241	44483	1239	44491	1246	44497	1245	44501	1235
44507	1239	44519	1245	44531	1243	44533	1246	44537	1245	44543	1241
44549	1247	44563	1243	44579	1242	44587	1245	44617	1240	44621	1243
44623	1247	44633	1240	44641	1243	44647	1247	44651	1253	44657	1239
44683	1241	44687	1249	44699	1247	44701	1244	44711	1245	44729	1246
44741	1249	44753	1255	44771	1241	44773	1245	44777	1252	44789	1246
44797	1246	44809	1249	44819	1246	44839	1248	44843	1246	44851	1250
44867	1241	44879	1255	44887	1252	44893	1253	44909	1248	44917	1253
44927	1246	44939	1251	44953	1252	44959	1253	44963	1245	44971	1253
44983	1244	44987	1254	44987	1244	45007	1248	45013	1257	45053	1253
45061	1250	45077	1253	45083	1256	45119	1255	45121	1255	45127	1248
45131	1254	45137	1258	45139	1252	45161	1251	45179	1256	45181	1251
45191	1254	45197	1252	45233	1252	45247	1251	45259	1263	45263	1254
45281	1253	45289	1260	45293	1259	45307	1261	45317	1251	45319	1254
45329	1252	45337	1260	45341	1260	45343	1256	45361	1258	45377	1262
45389	1257	45403	1255	45413	1256	45427	1257	45433	1266	45439	1255
45481	1258	45491	1256	45497	1258	45503	1275	45523	1263	45533	1259
45541	1259	45553	1259	45557	1254	45569	1260	45587	1263	45589	1258
45599	1252	45613	1263	45631	1262	45641	1255	45659	1264	45667	1257
45673	1268	45677	1258	45691	1256	45697	1257	45707	1270	45737	1260
45751	1263	45757	1262	45763	1261	45767	1264	45779	1267	45817	1265
45821	1258	45823	1261	45827	1257	45833	1257	45841	1261	45853	1259
45863	1271	45869	1265	45887	1267	45893	1259	45943	1261	45949	1263
45953	1271	45959	1268	45971	1271	45979	1264	45989	1257	46021	1272
46027	1270	46049	1269	46051	1261	46061	1266	46073	1269	46091	1268
46093	1266	46099	1266	46103	1265	46133	1267	46141	1266	46147	1277
46153	1274	46171	1267	46181	1273	46183	1267	46187	1265	46199	1266
46219	1273	46229	1273	46237	1271	46261	1266	46271	1276	46273	1268
46279	1272	46301	1269	46307	1270	46309	1275	46327	1269	46337	1280

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