



**U.S. Department  
of Transportation**

**Urban Mass  
Transportation  
Administration**

# CIRCULAR

**UMTA C 2710.1A**

Subject: SAMPLING PROCEDURES FOR OBTAINING FIXED ROUTE BUS OPERATING DATA REQUIRED UNDER THE SECTION 15 REPORTING SYSTEM July 18, 1988

---

1. PURPOSE. This circular details a suggested alternative sampling technique for collecting fixed route bus operating data required under the Section 15 Uniform System of Accounts and Records Reporting System.
2. CANCELLATION. This circular cancels UMTA Circular 2710.1, "Sampling Procedures for Obtaining Fixed Route Bus Operating Data Required Under the Section 15 Reporting System," dated 2-22-78.
3. REFERENCES.
  - Urban Mass Transportation Act of 1964, as amended.
  - Uniform System of Accounts and Records and Reporting System; Clarification of Procedures for Addressing Noncompliance with Reporting Requirements; Final Rule (52 FR 36182) (49 CFR 630), dated 9-25-87.
  - Urban Mass Transportation Industry Uniform System of Accounts and Records and Reporting System: Volume I - General Description, dated 1-77; Volume II - Uniform System of Accounts and Records, dated 1-77; and Reporting Manual and Sample Forms (All Reporting Levels), dated 2-88.
  - UMTA Circular 2710.2A, "Sampling Procedures for Obtaining Demand Responsive Bus System Operating Data Required Under the Section 15 Reporting System," dated 7-22-88.
  - UMTA Circular 2710.4A, "Revenue Based Sampling Procedures for Obtaining Fixed Route Bus Operating Data Required Under the Section 15 Reporting System," dated 7-22-88.
  - UMTA Circular 9030.1A, "Section 9 Formula Grant Application Instruction," dated 9-18-87.
4. BACKGROUND. The Federal Register of September 25, 1987, specifies that certain operating data must be collected as part of the Section 15 Uniform System of Accounts and Records and Reporting System. The Urban Mass Transportation Administration developed several suggested sampling techniques for collecting annual estimates of unlinked passenger trips and passenger miles. The technique in this manual is one of these suggested techniques which will yield sample data at the required levels of precision and accuracy.

A transit agency may use a technique other than the UMTA recommended techniques as long as it meets the prescribed precision and confidence levels. Implementation of a sampling procedure that has not been confirmed in writing by UMTA as meeting the prescribed statistical requirements may result in adjustments to future Section 9 formula apportionments if the data are found to be unreliable.

Additional copies of the forms contained in this circular for collecting transit service consumed data can be reproduced by the user, or obtained from:

Urban Mass Transportation Administration  
Office of Grants Management  
Audit Review and Analysis Division  
400 Seventh Street, S.W.  
Washington, D.C. 20590

Alfred A. DelliBovi  
Administrator

TABLE OF CONTENTS

CHAPTER		PAGE
I	INTRODUCTION	I-1
	1. Purpose of Manual	I-1
	2. Summary of Procedures	I-1
II	SAMPLE SIZE AND FREQUENCY	II-1
	1. Definitions	II-1
	2. Sample Size	II-1
III	COLLECTING THE DATA	III-1
	1. General Procedure	III-1
	2. The Survey Trip Sheet	III-1
	3. Pre-Survey Trip Procedures	III-1
	4. Survey Procedures	III-2
	5. Post Survey Procedures	III-3
IV	RECORDING AND ACCUMULATING SURVEY RESULTS	IV-1
	1. The Daily Record Sheet	IV-1
	2. Recording the Survey Results	IV-2
	3. Addition Information	IV-2
	4. Accumulating the Results	IV-2
V	ANNUAL REPORT TO UMTA	V-1
	1. Annual Unlinked Passenger Trips	V-1
	2. Annual Passenger Miles	V-1
VI	SELECTING THE SAMPLE	VI-1
	1. Developing the Daily List of Bus Trips	VI-1
	2. Selecting the Sample	VI-3
	3. Additional Comments	VI-5
Appendices		Page
A	DETERMINATION OF TIME PERIODS	A-1
B	SURVEY TRIP SHEETS	B-1
C	DAILY RECORD SHEETS	C-1
D	ANNUAL SUMMARY SHEET	D-1
E	TABLES OF RANDOM NUMBERS	E-1

## CHAPTER I

### INTRODUCTION

1. PURPOSE OF MANUAL. The Section 15 Reporting System requires that reporting agencies submit the following service consumed operating data elements annually:
  - a. Unlinked passenger trips
  - b. Passenger miles.

Unlinked passenger trips must be reported by average weekly time periods (AM peak, midday, PM peak, and other) and by average weekly total, average Saturday total, average Sunday total and annual total. Passenger miles must be reported only as totals for the average weekday, average Saturday, average Sunday, and annual.

The annual estimates for these service consumed data must be obtained by random sampling procedures according to specified confidence and precision levels unless 100% counts are taken.<sup>1</sup> The primary purpose of this manual is to provide the detailed sampling procedures that will conform to these specifications.

2. SUMMARY OF PROCEDURES. The circular is organized to provide you with the step-by-step sampling procedure without entering into any technical discussions. If followed carefully, these procedures satisfy the Section 15 reporting system requirements.

Chapter II gives you several alternatives as to the sample sizes and frequencies of sampling that will provide the required confidence and precision levels. You can select any alternative that fits your operation. Incidentally, these are minimum requirements to provide annual estimates. If for your own information you need daily, weekly, or monthly estimates within these confidence and precision levels, then you will need to increase the sample sizes.

Once you have selected the sample, the next step is to send the surveyor(s) out to collect the data. Chapter III provides you with the detailed procedures. You will find that this is a very simple process and that forms are provided on which the data are to be tabulated.

It is strongly recommended in Chapter IV that you record the sample results immediately after the survey is taken. A single form for this purpose is provided in Appendix C. The form provides columns for accumulation of the data on a weekly basis and over the entire year so that when the last sample is taken at the end of the year you will have all the information for the annual report to UMTA.

Chapter V discusses the Annual Report to UMTA. Here we ask that you send UMTA the accumulated numbers as well as the calculated values. This provides UMTA with additional sampling information that it needs to evaluate the procedures in the manual.

Finally, Chapter VI shows you how to select a random sample from your daily list of bus trips. The procedure uses the Table of Random Numbers provided in Appendix E. Random selection of the trips is an essential aspect of the entire process and is, perhaps, the only "new" concept you will encounter.

As indicated earlier, the information obtained by the procedures in the manual is an important part of the overall Section 15 Reporting System requirement. The data collected under this system will be used by UMTA and other groups as a basis for analyzing transit industry problems

---

<sup>1</sup> Passenger miles are to be estimated with confidence and precision levels of 95% and 10%, respectively.

and alternatives. For a more detailed discussion of how the data are to be used see Urban Mass Transportation Industry Uniform System of Accounts and Records and Reporting System, Volume I, Chapter 3.

CHAPTER II

SAMPLE SIZE AND FREQUENCY

1. DEFINITIONS. The following key definitions need to be introduced at this point:
  - a. Bus Trip--This is a one way trip by a bus in revenue service starting at one terminal point of a route and ending at another terminal point. A round trip, therefore, is counted as two separate trips. In the case where the route is a pure loop involving entirely different streets and pick-up points, and where there is no logical way to identify terminal points, then the traversing of the loop can be regarded as a single trip.
  - b. Daily List of Bus Trips--This is the list from which the samples will be drawn. It is your complete list of bus trips. Some properties have this list in the form of driver or bus "run" sheets. Others have the list in the form of "schedules" or "time tables." In any case, what is needed is the complete list of one-way bus trips including trippers, shuttles, etc., i.e., all trips to be taken during the day except charter, school bus, and demand response (dial-a-ride) trips.
2. SAMPLE SIZE AND FREQUENCY. Table II-1 provides you with alternative sampling plans that you can use and still be within the required accuracy limits. Note that Plan No. 2 yields the lowest total sample size for the year. This calls for selecting only three bus trips at random from your daily run sheets every other day and sending your surveyors (counters) out to collect the information described in Chapter III.

However, Plan No. 2 may not be the best plan from the standpoint of your particular operation. For example, if you have traffic counters (surveyors) out in the field every day, it may be more practical and less costly to choose Plan No. 1 and assign them two randomly selected trips to survey every day. Alternatively, if it is more convenient and/or less costly to send your surveyors out less frequently, you may prefer Plan No. 6. This would probably tie up at least two persons all day long, but it may be worth it if it involves less interference with their other duties. The most important point is that once you have chosen a plan, be sure that you select the trips at random using the procedure described in Chapter VI.

Table II-1

ALTERNATIVE SAMPLING PLANS THAT WILL YIELD REQUIRED ACCURACY\*

Plan Number	Frequency of Sampling	Bus Trips in Sample	Total Sample Size for Year
1	Every Day	2	730
2	Every Second Day	3	549
3	Every Third Day	5	610
4	Every Fourth Day	7	644
5	Every Fifth Day	10	730
6	Every Sixth Day	15	915

\*95% probability that true value of total passenger miles lies within 10% of sample of estimate.

## CHAPTER III

### COLLECTING THE DATA

1. GENERAL PROCEDURE. The general procedure for collecting the unlinked passenger trip and passenger mile data is for surveyors to ride the buses on the trips selected in the sample and count the passengers that board and de-board the bus at each point where the bus stops.<sup>2</sup> The distances between the stops are determined either directly from the bus odometer readings, maps, or by retracing the trip by automobile and recording the odometer readings. The combination of on-off counts and distances between stops provides all the information needed to obtain the two required estimates. The remainder of this chapter describes in detail the recommended procedure for conducting the on-board survey.
2. THE SURVEY TRIP SHEET. The recommended form for collecting the data appears in Appendix B. It is suggested that you study this form carefully before reading the following instructions. A filled-out trip sheet is also provided in the Appendix to help you trace the various steps in the procedure.
3. PRE-SURVEY PROCEDURES. A trip sheet should be used for each bus trip selected in the sample. If the trip involves more stops than are allowed for on a page, additional pages should be used, and the page numbers should be written in the upper right hand corner. The surveyor should carry several extra sheets with him in the event that this occurs.

Before going into the field, the surveyor should fill in the following items:

- a. Trip serial number--This is the unique number given to the trips on the daily list of trips. The method for assigning serial numbers is described in Chapter VI.
  - b. Date--The date the survey is taken.
  - c. Day of week--The day of week that the survey is taken. This is very important because data will eventually be recorded by day of week and time period (for unlinked passenger trips). The recording procedure is described in Chapter IV.
  - d. Time period--The time periods for weekdays are: AM peak, midday, PM peak, night (see definition in Appendix A). Saturdays and Sundays do not have time periods. The time at which the trip begins determines the time period in which it is classified.
  - e. Routenumber --This is optional. You may want to record the route number for future reference (e.g., if you want an analysis by route).
4. SURVEY PROCEDURES. The following instructions should be given to the surveyor:
    - a. Board the bus at the beginning point of the trip and station yourself so that you can observe both doors. During peak hours it may be necessary to have two surveyors, one stationed near each door. If two surveyors are used, the Survey Trip Sheets should have the same trip Serial Numbers and should be marked "Front Door" and "Rear Door," respectively.
    - b. The first step is to record item (6), Vehicle Inventory Number. This is important because then items (7) and (8) can be determined.

---

<sup>2</sup> The passengers are not contacted in any way. The surveyor simply stations himself at a point where he can observe passengers boarding and de-boarding and counts. During peak hours two surveyors may be needed.

- c. Next, record stop #1 in column (9), the stop description of the beginning point in column (10), and the odometer reading in column (12) if the bus has an odometer. If not, leave this column blank.
- d. When the bus leaves the beginning point record the number of passengers who boarded the bus in column (13). Include any passenger who might have stayed on board from the last trip.
- e. Only at points where the bus stops during the trip, record (9) stop number, (10) stop description, (12) odometer reading (from driver),<sup>3</sup> (13) passengers boarded, and (14) passengers de-boarded.
- f. Between stops, count the number on board (15). This should agree with the following calculation:

passengers on board between previous two stops, plus passengers who boarded at last stop minus passengers who de-boarded at last stop.

For example, in the survey sheet in Appendix B there were 25 on board between stops #3 and #4. At stop #4, 14 boarded and 2 de-boarded; therefore, the number on board between stop #4 and #5 should be

$$25 + 14 - 2 = 37$$

This should check with an actual head count after Stop #4. It is important to check the number on board whenever possible, because this is the key number in determining passenger miles.

- g. At the last stop, indicate that this is where the trip ended as shown in the Survey Trip Sheet example.
6. POST SURVEY PROCEDURES. The remaining columns and totals should be completed back at the office.
- a. If two surveyors are used, combine the results of the two trip sheets into a single one. Be sure to record the Trip Serial Number. Usually the only additional material that the rear-door surveyor will have is the rear-door de-board count (14). However, he should also be recording items (9), (10), and (15) so that this can be checked with the front-door surveyor.
  - b. Determine the distance between stops, column (16), from the bus odometer readings. If the bus odometer readings could not be obtained, determine the distances from a map or by retracing the route by automobile or a combination of both. Map distance alone may not be accurate if the route involves a large proportion of curved streets such as are in some suburban areas.
  - c. For each between stop distance, multiply the number of passenger on board (15) times the distance between stops (16) to get the passenger miles generated between stops.
  - d. Now sum all of the columns specified by the numbers in parenthesis at the bottom of the trip sheet:

$$(20) = \text{sum of column (12)} = \text{total passengers boarded}$$

---

<sup>3</sup> If the bus has no odometer, or if the bus driver is too busy to call out the readings, leave this column blank.



(21) = sum of column (15) = total passengers on board.

This can be used to get the average on board between stops and maximum loads.

(22) = sum of column (16) = bus trip distance

(23) = sum of column (17) = total passenger miles for the trip.

- By referring to the vehicle category number and its corresponding model characteristics, determine (7) Total Capacity and (8) Seated Capacity. Total capacity is defined as the normal full load (seated plus standing) as determined by your loading policy.
- Now multiply (7) Total Capacity times (22) Bus Trip Distance to get (26) Capacity Miles.
- Multiply (8) Seated Capacity times (22) Bus Trip Distance to get (27) Seat Miles.

Items (20) through (27) are next recorded on the Daily Record Sheet as described in the next section.

## CHAPTER IV

### RECORDING AND ACCUMULATING SURVEY RESULTS

It is strongly recommended that you adopt the following procedure whereby the survey results for each survey day are systematically recorded each day and accumulated each week. This minimizes the work at the end of the year and reduces the chance of error or loss of information.

1. THE DAILY RECORD SHEET . The form for recording the survey results is called "Daily Record Sheet." A set of blank sheets is provided in Appendix C. An illustration of a partially filled-out set also appears in Appendix C.
2. RECORDING THE SURVEY RESULTS. At this point please refer to page 1 of the Daily Record Sheet Illustration (Appendix C) and the filled-out Survey Trip Sheet in Appendix B.

The Daily Record Sheet is designed to record the totals on the Survey Trip Sheet, i.e., items (20) through (27). On page 1 of the Daily Record Sheet note that the circled number 49 for item (20) "Passengers boarded" corresponds to 49 passengers boarded--item (20)--on the survey trip sheet. Similarly, the circled number 198 for item (21) "Passengers on Board" on the Daily Record Sheet corresponds to the total passengers on board--item (21)-- on Survey Trip Sheet, and so on. These figures have been entered on Tuesday during the A.M. Peak, because items (3) and (4) at the top of the Survey Trip Sheet indicate that this is when the survey trip was taken.

The procedure, therefore is simply to record the totals on the Survey Trip Sheet according to the day and time that the trips are made. If you will now examine pages 2 and 3 of the Daily Record Sheet, you will see that all the circled figures correspond to the totals on the Survey Trip Sheet. All are entered in the Tuesday-A.M. Peak position.

The other figures in page 1 of the Daily Record Sheet are the hypothetical results of the other surveys taken during the week. Samples of three trips were taken on Tuesday, Thursday, and Saturday, and the totals from the Survey Trip Sheets were recorded. For Saturdays, the combined totals for the three trips were recorded because Saturday (and Sunday) results are not recorded by time period.

Note: If more than one trip is taken during a time period on a weekday, just combine the totals on the trip sheets as you do for Saturday and Sunday.

3. ADDITIONAL INFORMATION . Two vital additional items of information are needed. First, please turn to page 3 of the Daily Record Sheet. It is essential that item (28) "Trips in Sample" be recorded according to time period and day of week. Otherwise it will be impossible to make the calculations according to the UMTA requirements.

Another essential additional data item is (29) "Number of Bus Trips." This is the total number of bus trips taken by all buses during the entire week by time period. Be sure to record the trips for the entire week, not just for the sample days. It is not necessary to record the trips by day of week, but it is essential to record them by time period.

In most cases the number of bus trips can be estimated directly from your schedules, because the number of trips each day will not change a great deal. However, when the schedule is changed, or when emergency conditions seriously affect the number of trips, an actual count should be taken and new estimating levels established. Some properties may find it simpler to record the number of trips, in each time period every day, because this information is usually needed and readily available. Be sure to include trippers, shuttles, downtown shopper, and other special trips. Do not include charter, school bus, and demand response trips.

4. ACCUMULATING THE RESULTS. When a week's sampling has been completed and the totals from the Survey Trip Sheets have been recorded, the results should be totaled for the week.

Now here is where a great deal of time can be saved at the end of the year when the UMTA report is due. Keep a running total of the results. Add the total for the week to the cumulative total of previous weeks to get a new cumulative total. If this procedure is followed faithfully, the cumulative total for the last week in the year will contain all the information necessary to complete the UMTA Annual Report described in the next chapter.

CHAPTER V

ANNUAL REPORT TO UMTA

A sample form (Form 406A) for the Annual Report to UMTA is provided in Appendix D. This report must be included along with the other reports required under Section 15.

If you have accumulated your sample data using the Daily Record Sheets, lines 1 through 8 can be copied directly from the "Cumulative Total" column from the last week of the year. The "night" time period is the same as the "other" time period on Form 406A.

1. ANNUAL UNLINKED PASSENGER TRIPS (line 11) are obtained by a two-step process:
  - a. Divide the sample total number of passengers that boarded (line 1) by the total number of trips in the sample (line 7) to get the average number of unlinked passengers per trip (line 9).
  - b. Multiply the average unlinked passengers per trip (line 9) by the total number of trips (line 8).
2. ANNUAL PASSENGER MILES (line 12) are also obtained by a two-step process:
  - a. Divide the sample total passenger miles (line 4) by the total number of trips in the sample (line 7) to get the average passenger miles per trip (line 10).
  - b. Multiply the average passenger miles per trip (line 10) by the total number of bus trips (line 8).

In addition to the Annual Report, you are requested to indicate your service time periods. A sample form (Form 401) and corresponding definition appear in Appendix A.

CHAPTER VI

SELECTING THE SAMPLE

Now that you have an idea of the entire process, there is one final procedure that needs to be discussed. This is the procedure for selecting trips in the samples. Here it is important that you use random sampling procedures; that is, every bus trip in your daily list of bus trips (see page II-1 for definition) must have the same probability of being selected. This section describes a method for ensuring that your selection process will be random.

1. DEVELOPING THE DAILY LIST OF BUS TRIPS. The first task is to identify and assign a number to all one-way bus trips to be taken during the day. For some properties the easiest procedure may be to use your bus schedules or timetables. Others may wish to use their daily driver run sheets. The main thing to remember is that a bus trip is a one-way trip and that express, trippers, shuttles, and other special trips (except charter, school bus, and demand-response) should be included.

Table VI-1 illustrates how trips may be identified and numbered from a route schedule. Each trip is given a serial number. The first two digits represent the route number. The second two digits represent the trip number for the route. The inbound trips are given odd numbers, and the outbound are given even numbers. It is not necessary to write down all the Trip Serial Numbers--just the first and the last so that you will know the range of numbers. In this case the range is 0201-0248.

When you have numbered the trips for all routes, you should set up a summary table as shown below.

<u>Route Number</u>	<u>Trip Serial Numbers</u>
1	0101-0172
2	0201-0248
3	0301-0364
4	0401-0464
•	
•	
•	
99	9901-9965

Table VI-1  
TRIP LIST FOR ROUTE #2

ROUTE #2				
Trip Serial Number	Bro. & Whitaker		Traffic Circle Lv.	Trip Serial Number
	Ar.	Lv.		
	PO	6:55		
0201		7:03	7:20	0202
0203	7:38	7:43	8:00	0204
•	8:18	8:23	8:40	•
•	8:58	9:03	9:20	•
•	9:38	9:43	10:00	•
	10:18	10:23	10:40	
	10:58	11:03	11:20	
	11:38	11:43	12:00	
	12:18	12:23	12:40	
	12:58	1:03	1:20	
	1:38	1:43	2:00	
	2:18	2:23	2:40	
	2:58	3:03	3:20	
	3:38	3:43	4:00	
	4:18	4:23	4:40	
	4:58	5:03	5:20	
	5:38	5:43	6:00	
	6:18	6:23	6:40	
	6:58	7:03	7:20	
	7:38	7:43	8:00	
	8:18	8:23	8:40	
	8:58	9:03	9:20	
0245	9:38	9:43	10:00	0246
0247		10:15	10:30	0248
		10:45		

"Route 99" can be your list of trippers and other special trips that are not part of your regular schedule.

There are many other ways that you can identify and number trips, and some of these will be discussed later on. The next subsection shows you how to select a random sample using your summary table of Trip Serial Numbers.

2. SELECTING THE SAMPLE. Suppose that you have elected Plan No. 2 in Table II-1 (Chapter II), which involves taking a sample of three bus trips every second day. Suppose further that you have only the four route and trippers shown in the summary table on page VI-1. Now the problem is to select a random sample of three trip serial numbers from the list.

The easiest way to do this is to use the Tables of Random Numbers that are provided in Appendix E. Table VI-2 presents one of these tables. The procedure for selecting the sample of three Trip Serial Numbers is as follows:

- a. Choose any line of digits in the table, say line 1.
- b. Because the Trip Serial Numbers contain only four digits, use only sets of four digits.
- c. Read along the line in successive sets of four digits until you find three numbers that are within your summary table. In this case the first set of four digits is 9674. The second set is 6742 (the first 9 is dropped, and the 2 on the next column is added). Continuing along the line we get:

7420 4208 2084 0848 0156

0156 is the first number encountered that is in the summary table. The other two are the circled numbers in line 3. These are 0441 and 0324.

Note: The blanks in the table should be counted as zeros.

- d. The three trips to be surveyed on the first day, therefore, are:
  - a. Route #1, trip #56
  - b. Route #4, trip #41
  - c. Route #3, trip #24

Now go back to your original lists for routes #1, #4, and #3 and locate trips #56, #41, and #24, respectively.

Then enter the Trip Serial Numbers on the Survey Trip Sheets. You are now ready to perform the pre-survey tasks indicated in Chapter III.

Table VI-2

RANDOM NUMBERS

9674	2084	8980	7694	2426	1895	8301	5635	8815	7259
2207	581	637	1836	2428	8376	3054	1127	4914	954
6668	2829	1583	5085	1274	5604	4182	1703	2471	2136
9569	2278	3553	8577	6941	4988	6344	8744	8827	9659
5917	7680	8874	6719	5342	5430	739	1639	7912	8144
3622	2605	5502	9880	1243	5406	2984	4692	2307	5757
9882	4881	1760	5567	1670	7512	3367	5860	4406	7560
5436	5350	7605	2284	2700	9905	1533	7702	8692	4366
6343	4270	4124	4484	1724	5120	8094	2934	6983	6474
150	9650	2735	6090	2524	2973	6618	1852	3064	4331
6714	8852	676	5450	7585	9596	6322	3318	5112	8166
3857	4396	7539	5474	6266	5807	1412	8940	4099	7481
2328	6234	4136	5507	1660	8911	7593	3154	1692	8072
8412	2312	2821	396	3425	4340	7766	9160	7454	5530
8935	1102	7627	8709	6397	6239	2467	8679	5097	3989
2549	5500	1278	5273	768	5846	9240	6254	1528	8909
891	6164	9372	9605	1737	7232	886	8042	8258	1535
8888	502	2812	5554	5229	3424	2517	9567	7728	8097
7766	5221	8061	82	9298	908	6628	3572	10	799
7715	7180	8915	9637	3484	3902	1923	1668	8592	4219
7378	8294	8495	7588	3504	5333	5712	3802	5203	6972
9625	1950	8854	9794	6582	962	5053	6470	8375	1984
459	4987	8372	9047	1170	5513	5862	786	1293	3274
404	2175	1642	2028	9223	1530	4727	9014	1959	4245
3461	8485	8315	1014	2254	7174	5388	4513	413	1308
2747	4770	9029	1027	4542	9732	3764	4332	9203	3730
7215	8890	8511	2855	5772	6341	9098	2461	7148	9939
677	8294	6000	2654	6531	8960	6309	9082	3081	3749
450	783	6559	6009	6114	895	6098	8597	3507	147
3779	4099	6510	2618	3429	8842	2692	5854	1227	5907
8390	6216	2403	8631	6232	6540	9586	2347	3817	9504
9592	8325	3441	6275	6706	171	4062	6330	1741	9144
7914	530	7440	1147	5450	5827	2004	4363	3530	6205
3791	2782	3026	717	1501	7080	3274	5722	5368	624
2029	4690	6180	4538	865	5179	159	2116	7175	8838
8999	9018	5201	6566	5617	2019	9764	7152	7409	5284
7616	4045	53	9391	2586	1081	6164	4605	1943	4293
4347	6132	2646	3160	5433	5324	7402	904	3969	7095
1707	9691	4229	1	4289	2856	1315	1752	4631	2493
9145	9111	2483	7042	8350	7430	5548	9713	8413	1310
2762	4863	9568	4103	1827	5696	1266	260	939	2876
5265	749	5865	9925	2615	8020	4802	7517	5121	3273
4685	5017	3042	4992	3868	3881	2101	3988	7348	3781
4097	6440	1956	8556	6656	2658	181	5346	8923	5564
2564	6536	1251	9110	9810	343	8172	3138	7065	2183
5198	7398	4011	5154	1257	3714	5711	4258	9801	1540
373	5222	2894	8380	1452	5013	3813	2811	2771	7426
4974	4093	6568	3341	9214	8601	5655	1513	3741	9563
2109	2061	7288	2835	6149	602	2276	7706	155	8891
5023	7955	3962	736	8307	4657	8883	2389	1821	8464



- e. Keep track of the lines that you have used in the tables of random numbers. On the next sample day continue where you left off and select three more trips, and so on throughout the year. If you run out of pages in the Appendix, reverse the process starting from the right side of the lines, or use some other technique that will not retrace the set of numbers you selected.

### 3. ADDITIONAL COMMENTS.

#### a. The Daily List

- (1) Normally, you will not have to develop a new summary table of Trip Serial Numbers every day. As long as the schedules remain the same, the scheduled Trip Serial Numbers will remain the same. However, you may need to re-number your trippers more frequently. This is why it is a good idea to keep these separate.
- (2) Some properties have driver "run" sheets that list all the trips to be taken by each driver for the day. Here the assignment of Trip Serial Numbers can be keyed to the driver number and the trips that the driver takes. For example, suppose the driver numbers have four digits. Since no driver is likely to take more than 99 trips during one day, the next two digits can be the trip number. The Trip Serial Numbers will look like this:

<u>Driver</u>	<u>Trip</u>
XXXX	XX

You can generate a summary table containing the ranges of Trip Serial Numbers. This, incidentally, will automatically include drivers of trippers. The sample selection process is exactly the same, except six digits are used instead of four.

- (3) In general, any process, which assigns a unique number to a bus trip, is acceptable. If the serial numbers have a large number of digits, however, it becomes more difficult to find them in the table of random numbers.

#### b. Sample Selection Process

- (1) Don't substitute a sample selection process that appears to provide "more representative" trips. By doing this you may inadvertently introduce biases that cannot be evaluated by standard statistical methods. If you use another process, be sure that you can demonstrate that it is a random process and that it yields estimates within the prescribed limits given in Table II-1.
- (2) The random selection process will automatically distribute the trips according to time period, so you do not have to worry about whether you are getting adequate representation in peak periods. This is another reason for strict adherence to the random sampling process.

- (3) If for some reason a trip that you selected for your sample is eliminated from the schedule or terminated due to breakdown, simply choose another trip, using the same procedure.
  - (4) For surveyor scheduling purposes you may need to choose the samples well in advance of the days that the surveys are to be taken. This is acceptable if the daily trips are relatively constant. If major scheduling changes occur, however, the samples should be re-drawn.
  - (5) If you have a 7-day schedule, the day of the week that you start sampling does not matter, but be sure that you adhere to the frequency that you selected.
  - (6) If you have a 6-day schedule, be sure to start on a different day each week. The main thing to avoid is sampling on the same days every week. If you sampled on Monday, Wednesday and Friday the first week, be sure to sample on Tuesday, Thursday, and Saturday of the following week, and so on.
  - (7) Sampling theory assures that the sampling plans in Table II-1 apply to any size of operation. The problem with large operations with complex service structures is not the sample size but the ability to select a random sample. It is believed, however, that most large properties have accurate daily lists of bus trips or driver "run" sheets so that the selection process described above can be used.
  - (8) Some large properties with complex trip structures may be able to design a more efficient (same accuracy at less cost) sampling plan by using stratified sampling methods. A preliminary examination of several large properties indicated, however, that major improvements in efficiency are not likely.
- c. Charter, School Bus, and Demand Response Operations . The sampling procedures described in this circular do not apply to your charter, school bus (bus used exclusively for carry school children) and demand response (dial-a-ride) operations. Procedures for demand response operations are described in a separate manual.

## APPENDIX A

### DETERMINATION OF TIME PERIODS

A form for indicating your service periods appears on the next page. The following definitions apply to that form.

#### SERVICE TIMES.

Time A.M. Service Begins - The time earliest in the morning when a bus begins its first trip after the break between night service and morning service. If you have 24-hour service, assume that the service begins at 2400 hours.

Time A.M. Peak Begins - The time in the morning when additional service is provided to handle higher passenger volumes.

Time Midday Begins - The time in the morning when normal-scheduled (base) headways are resumed.

Time P.M. Peak Begins - The time in the afternoon or evening when service is again increased to handle higher passenger volumes.

Time Night Service Begins - The time in the evening when the P.M. peak ends and normal scheduled night headways are begun.

Time Night Service Ends - The time that the last bus ends its last trip. This may be in the early morning (e.g., 2:00 A.M.). If you have 24-hour service, assume that night service ends at 2400 hours.

#### SERVICE PERIODS.

A.M. Peak - The period between the time when A.M. Peak service begins and the time when Midday service begins.

Midday - The period between the time when Midday service begins and P.M. service begins.

P.M. Peak - The period between the time when P.M. Peak service begins and Night service begins.

Night - The period between the time Night service begins and A.M. Peak service begins. Note that this includes part of the early morning service just before the A.M. peak.

Form 404  
**TRANSIT SYSTEM EMPLOYEE EQUIVALENT SCHEDULE**

Transit ID

Level

Fiscal Year End (mm/dd/yy)

Mode

a		b	c
Line No.	LABOR CLASSIFICATION	EMPLOYEE EQUIVALENTS	
		OPERATING LABOR	CAPITAL LABOR
01	Transportation Administration		
02	Revenue Vehicle Operation		
03	Transportation Support		
04	Vehicle Maintenance Administration		
05	Revenue Vehicle Inspection & Maintenance		
06	Vehicle Maintenance Support		
07	Non-Vehicle Maintenance Administration		
08	Non-Vehicle Maintenance Support		
09	Marketing and Planning		
10	General Administration Support		
11	<b>TOTAL TRANSIT SYSTEM EMPLOYEE EQUIVALENTS</b>		

#### CLASSIFICATION OF BUS TRIPS.

A bus trip is classified into one of the four time periods according to the time when the trip begins. All trips are classified into the time period when the trips begin even though they may be regarded as being in the "base schedule."



### SURVEY TRIP SHEET

(1) Trip Serial No. 07-4 (2) Date 10/18/77 (3) Day of Week Tuesday (4) Time Period AM Peak  
 (5) Route No. 2N (6) Vehicle Inventory Number 404 (7) Total Capacity 85 (8) Seated Capacity 48

(9)	(10)	(12)	(13)	(14)	(15)	(16)	(17)
Stop No.	Stop Description	Odometer Reading	Passengers Boarded	Passengers De-Boarded	Passengers On Board	Distance Between Stops	Passenger Miles (15) X (16)
1	BEGIN Silver Spring Station	889.0	20	-	20	1.0	20.0
2	Georgia and Alaska	890.0	10	0	30	1.5	45.00
3	<sup>16</sup> th and Alaska	891.5	0	5	25	2.2	55.0
4	<sup>16</sup> th and Colorado	893.7	14	2	37	2.4	88.8
5	<sup>16</sup> th and Harrad	896.1	5	7	35	1.2	42.0
6	<sup>16</sup> th and Florida	897.5	0	2	33	1.2	39.6
7	<sup>16</sup> th and K	898.5	0	15	18	.5	9.0
8	END Federal Triangle	899.0	0	18	-		

850.0	(26) Capacity Miles X (22)	Totals	49 (20)	198 (21)	10.0 (22)	299.4 (23)
480.0	(27) Seat Miles X (22)					

(8)

### DAILY RECORD SHEET

Week Ending Sunday \_\_\_\_\_

Page 1 of 3

Data Elements	Monday	Tuesday	Wednesday	Thursday	Friday	Total for This Week	Previous Cumulative Total	Cumulative Total
<b>(20) Passengers Boarded</b>								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								
<b>(21) Passengers on Board</b>								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								
<b>(22) Bus Trip Distance</b>								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								
<b>(23) Passengers Miles</b>								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								



DAILY RECORD SHEET - continued

Week Ending Sunday \_\_\_\_\_

Page 2 of 3

Data Elements	Monday	Tuesday	Wednesday	Thursday	Friday	Total for This Week	Previous Cumulative Total	Cumulative Total
<b>(26) Capacity Miles</b>								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								
<b>(27) Seat Miles</b>								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								
<b>(28) Trips in Sample</b>								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								
<b>(29) Number of Bus Trips</b>								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								

DAILY RECORD SHEET - continued

Week Ending Sunday \_\_\_\_\_

Page 3 of 3

Data Elements	Monday	Tuesday	Wednesday	Thursday	Friday	Total for This Week	Previous Cumulative Total	Cumulative Total
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								

DAILY RECORD SHEET

Week Ending Sunday \_\_\_\_10-23-77\_\_\_\_

Page 1 of 3

Data Elements	Monday	Tuesday	Wednesday	Thursday	Friday	Total for This Week	Previous Cumulative Total	Cumulative Total
<b>(20) Passengers Boarded</b>								
AM Peak		<b>49</b>				49	728	777
Midday		38		42		80	643	723
PM Peak				76		76	964	1040
Night		22		18		40	205	245
Saturday						<b>103</b>	522	625
Sunday						-	312	312
TOTAL						348	3374	3722
<b>(21) Passengers on Board</b>								
AM Peak		<b>198</b>				198	2462	2660
Midday		125		95		220	1812	2032
PM Peak				220		220	3412	3632
Night		98		82		180	890	1070
Saturday						<b>95</b>	1120	1215
Sunday						-	980	980
TOTAL						913	10676	11589
<b>(22) Bus Trip Distance</b>								
AM Peak		<b>10.0</b>				10.0	112.8	122.8
Midday		6.8		8.8		15.6	108.7	124.3
PM Peak				11.2		11.2	140.2	151.4
Night		11.1		8.5		19.6	120.6	140.2
Saturday						<b>32.4</b>	122.8	155.2
Sunday						-	115.7	115.7
TOTAL						88.8	720.8	809.6
<b>(23) Passengers Miles</b>								
AM Peak		299.4				xxxx	xxxx	xxxx
Midday		xxxx		xxxx		xxxx	xxxx	xxxx
PM Peak				xxxx		xxxx	xxxx	xxxx
Night		xxxx		xxxx		xxxx	xxxx	xxxx
Saturday						xxxx	xxxx	xxxx
Sunday						-	xxxx	xxxx
TOTAL						xxxx	xxxx	xxxx

DAILY RECORD SHEET - continued

Week Ending Sunday \_\_\_\_\_

Page 2 of 3

Data Elements	Monday	Tuesday	Wednesday	Thursday	Friday	Total for This Week	Previous Cumulative Total	Cumulative Total
<b>(26) Capacity Miles</b>								
AM Peak		<b>850</b>						
Midday		xxxx		xxxx		xxxx	xxxx	xxxx
PM Peak				xxxx		xxxx	xxxx	xxxx
Night		xxxx		xxxx		xxxx	xxxx	xxxx
Saturday						xxxx	xxxx	xxxx
Sunday						-	xxxx	xxxx
TOTAL						xxxx	xxxx	xxxx
<b>(27) Seat Miles</b>								
AM Peak		<b>480</b>				xxxx	xxxx	xxxx
Midday		xxxx		xxxx		xxxx	xxxx	xxxx
PM Peak				xxxx		xxxx	xxxx	xxxx
Night		xxxx		xxxx		xxxx	xxxx	xxxx
Saturday						xxxx	xxxx	xxxx
Sunday						-	xxxx	xxxx
TOTAL						xxxx	xxxx	xxxx
<b>(28) Trips in Sample</b>								
AM Peak		<b>1</b>				1	8	9
Midday		1		1		2	2	4
PM Peak				1		1	10	11
Night		1		1		2	4	6
Saturday						3	6	9
Sunday						-	6	6
TOTAL						9	36	45
<b>(29) Number of Bus Trips</b>								
AM Peak						xxxx	xxxx	xxxx
Midday						xxxx	xxxx	xxxx
PM Peak						xxxx	xxxx	xxxx
Night						xxxx	xxxx	xxxx
Saturday						xxxx	xxxx	xxxx
Sunday						xxxx	xxxx	xxxx
TOTAL						xxxx	xxxx	xxxx

DAILY RECORD SHEET - continued

Week Ending Sunday \_\_\_\_\_

Page 3 of 3

Data Elements	Monday	Tuesday	Wednesday	Thursday	Friday	Total for This Week	Previous Cumulative Total	Cumulative Total
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								
AM Peak								
Midday								
PM Peak								
Night								
Saturday								
Sunday								
TOTAL								

<input style="width: 80%; height: 20px;" type="text" value="Transit ID"/>	<b>Form 406A ANNUAL DATA TO FTA</b>	<input style="width: 80%; height: 20px;" type="text" value="Level"/>
<input style="width: 90%; height: 20px;" type="text" value="Fiscal Year End (mm/dd/yy)"/>	<input style="width: 80%; height: 20px;" type="text" value="Type of Service"/>	<input style="width: 80%; height: 20px;" type="text" value="Mode"/>

Line No.	ITEM	WEEKDAYS				SATURDAY	SUNDAY	TOTAL
		AM PEAK	MIDDAY	PM PEAK	OTHER			
	Accumulations from Daily Record Sheet							
01	(20) Passengers Boarded							
02	(21) Passengers on Board							
03	(22) Bus Trip Distance							
04	(23) Passenger Miles							
05	(26) Capacity Miles							
06	(27) Seat Miles							
07	(28) Trips in Sample							
08	(29) Total Number of Bus Trips							
	Sample Averages							
09	Unlinked Passengers per Trip (1/7)							
10	Passenger Miles per Trip (4/7)							
	Annual Totals							
11	Unlinked Passengers per Trip (1/7)							
12	Passenger Miles per Trip (4/7)							

\*DO = Directly Operated    PT = Purchased Transportation

Sample Plan Used \_\_\_\_\_

Date Prepared \_\_\_\_\_ Date Updated \_\_\_\_\_

APPENDIX E  
TABLES OF RANDOM NUMBERS

3554	4224	3380	8191	7393	9150	6665	7894	2309	5730
9567	2421	5037	9828	2348	7773	9018	5836	2898	3081
8340	4381	5295	3423	1843	2849	2400	2794	7928	9437
6149	5561	1879	9745	469	1045	3725	1111	2984	2056
5960	8196	2942	4521	1658	3548	4026	1544	4773	9130
1977	1512	5685	9033	8195	6118	6283	2884	1748	383
124	1657	3451	3076	4480	7895	6947	2099	7302	552
2955	5730	3423	969	4106	6817	5513	4687	9047	3281
6614	4108	5726	4546	2288	9223	5033	9751	1669	2894
7222	9855	7982	3433	4782	1986	310	3444	6677	660
9669	186	137	6712	3672	8921	7410	1060	5351	6992
6147	6659	2911	2614	3359	8247	8479	8608	4095	5752
5137	7571	7275	3467	2788	1207	2353	3349	4653	2807
1723	7053	7444	8155	5044	7560	9508	6061	2906	7517
2499	7100	8513	7618	3359	3129	7292	4698	4669	9234
5618	5312	2653	3744	1060	6992	3411	9312	7829	5486
9210	4036	2353	2617	7327	7831	5138	5603	7562	5541
6351	4964	864	4539	3785	4363	8985	778	3144	1996
1345	3542	1795	9391	9016	5385	8435	9719	6295	9972
2328	3986	1649	6827	7039	9708	1093	8219	4840	2931
8293	9653	9203	702	6929	1729	4059	7363	2140	7325
9739	4254	9073	4360	6771	8713	7844	606	9962	4453
5463	3300	6420	1702	6507	2514	2455	1697	5600	3552
5521	6401	5986	9829	8627	543	9756	3978	5881	9355
6506	1176	9101	1602	8496	4906	6644	3768	1588	1661
6905	7514	2515	7301	129	8753	4289	4072	3488	2971
2778	3496	5504	7637	8757	6641	7486	8814	984	9487
253	5341	7092	7376	6459	183	338	8793	9464	4813
1527	4942	1229	8737	6631	7872	2992	2523	1919	6117
3187	8931	9639	3106	68	3027	8548	9805	4350	8359
4833	9346	2626	2589	235	7612	247	2158	5398	19
5236	1868	7769	983	5607	1475	4568	8797	3759	7662
2648	4907	2867	5996	8273	2828	1444	3725	1130	8174
3491	538	8098	7538	2908	631	1500	211	2098	5702
4554	2978	5918	4720	9247	4460	3411	2594	661	1753
993	6088	6055	8338	2005	1598	5847	8500	8816	5651
6102	9744	4883	5224	154	933	5459	1267	6182	140
6852	5007	8763	2451	5420	2923	3729	4188	8718	2477
6824	6308	2470	6981	8047	5948	8291	4188	4505	1348
8320	9490	6891	1649	4205	809	2954	9294	9092	8560
8301	9008	2549	279	9059	3610	9605	5793	7796	3121
6307	5022	2549	9920	5480	6789	862	8917	7617	3230
1874	7991	3047	964	753	169	2838	4199	1027	5275
7071	8840	1608	5064	434	7741	6556	2019	6291	2416
6877	8358	1661	7644	4904	7937	6766	9222	3062	63
4079	9203	53	437	3041	9479	8771	714	7867	816
1482	4419	7118	704	9080	3196	4955	9632	2443	3633
5247	1640	5215	1135	967	1271	8538	3598	2523	5261
9538	3846	9977	3605	6622	6085	5297	828	5855	7847

2078	4596	4008	5161	1403	5012	5024	4936	3962	4204
7990	4795	8197	2081	5887	6831	1112	349	5677	8033
8399	3151	1514	6367	5813	8946	4140	7726	3765	4488
747	5265	3962	7994	868	8825	6553	4891	5073	8454
7709	5727	4554	2241	8816	2120	797	4962	9690	2839
6125	263	9498	8399	6535	5366	292	8755	242	3540
9348	4973	6014	5806	7714	1977	6905	9629	3645	5733
6190	8562	853	4487	3529	3097	2734	9902	676	9189
4996	217	7264	7198	373	3788	8477	226	323	7573
7643	7908	9902	1562	8051	1450	3230	6029	9542	4677
8212	5198	6666	6710	455	6785	6450	4897	7533	3341
5083	7312	6028	7476	4054	3640	5034	9339	7546	1968
1018	959	4135	7362	236	8300	7082	3317	6109	8152
8777	3967	238	3207	6118	994	6978	4935	4888	5494
2748	112	2408	1270	2487	3122	9034	2281	6940	2379
275	3257	5691	5488	2589	8685	2112	3997	7161	1668
7656	4859	7188	386	4160	1951	5494	6144	4088	7271
501	3241	9869	7660	9866	7144	4779	9180	3231	3704
9008	7473	9523	8394	5861	8749	953	808	245	2230
6166	5903	4876	1183	9930	9713	8871	5885	7068	3536
8654	8139	5029	6807	2337	3194	3502	5156	4010	1188
1609	6383	3604	6459	4480	3325	1248	9347	2255	8867
2303	1340	5806	4564	478	670	4738	616	7714	1730
4443	1183	750	7903	286	5271	5547	3688	8188	9669
1993	8201	2170	6682	2549	8439	662	5634	9777	6903
4598	3386	8908	4434	1619	5335	2876	5382	1922	4655
8486	8470	2550	3742	3650	2972	8167	8103	6847	5882
7624	9184	1241	2788	6857	8855	7117	9784	9916	4547
7575	2055	1166	278	3635	9385	2967	5037	6184	5898
4374	6280	3437	7359	7649	2507	3834	5651	644	5164
5539	6282	4339	6346	4970	1037	6098	5048	8034	4128
413	930	8972	6453	220	851	3011	8832	3045	9636
222	1311	7562	2832	9272	1914	7327	5416	984	4438
9766	6704	2875	1159	9691	7939	7103	2549	7899	5298
5482	2370	6656	7290	6503	2767	5099	1799	517	180
8873	4235	511	9230	9530	4542	7147	7917	498	7045
7985	3730	7663	3364	2065	6550	3864	4887	2261	438
748	7529	9092	2678	9473	7774	903	4679	4220	5210
6586	5597	1300	3079	8276	5781	905	4531	2671	3418
7407	8611	925	3968	6540	6177	8264	8258	5871	2255
5771	1340	9106	7561	7952	482	6023	8169	1112	689
1080	8562	8607	2019	5003	9554	445	5603	4889	8813
5907	8731	9625	7974	9096	1610	8682	6565	8598	1851
3553	9249	3664	5402	2416	9100	600	8480	9791	5905
4274	3111	4251	4721	919	1147	8488	6186	9650	1853
7261	6291	1372	6435	53	9632	4992	9127	6452	6342
2122	2663	3579	9217	2671	6289	6097	3746	5030	6634
590	51	5735	6076	7386	1948	4816	9449	4087	4642
4225	6206	6382	8758	8034	1377	2917	4724	4311	5007
2290	7712	9859	5793	1448	9644	229	1179	6047	987



8686	2173	4564	1316	9043	7530	9214	3891	8543	8156
7963	5729	8208	8838	3187	899	9316	668	3774	1031
5953	3755	8716	3269	4783	6107	1485	2160	4477	768
5742	8203	8469	9590	4182	2051	5951	8233	3544	9590
7302	3266	105	9396	1338	8465	1192	289	3093	3684
9508	2973	2023	5890	8326	5998	1820	8235	6842	2532
4257	9268	6237	665	729	647	8242	6247	6415	7965
9260	3475	3243	5542	4330	4732	9060	2300	6490	7394
1694	2068	8332	1612	7827	7947	3796	9276	7849	6574
9503	669	9114	4403	6162	1534	1271	4366	1870	9536
8593	7516	328	5369	5474	515	8285	9965	2521	6078
7752	5570	1899	9728	9785	4651	1875	2477	7879	6869
1703	5285	277	622	9297	7417	1730	1860	5355	7041
6522	9190	8847	8697	5790	488	53	8478	3443	2466
8570	4048	6228	1064	4945	2837	4737	6430	5881	8045
3407	2934	4166	8297	8801	580	5757	3067	6727	587
7691	2226	9979	4123	1741	4330	9767	9417	9992	4493
5107	8745	9761	8977	5744	3014	6519	9836	5383	7935
4762	9234	3288	2019	7979	9302	3543	2874	149	9626
2521	4547	2444	745	6353	4887	44	8255	1456	8167
5257	8384	2407	4454	4349	2145	2708	3447	6761	1428
5250	6788	6636	6642	511	9062	7832	1759	1797	3977
4831	8884	8056	8464	3230	685	6081	3677	4726	5329
5136	8166	2766	4745	8301	4384	6295	3349	6102	7283
266	585	9189	7255	2826	6881	8142	9392	370	8894
9685	4499	2863	6144	9856	4953	3122	7399	5932	4328
4962	1422	159	6038	6389	2932	9576	2468	5261	902
7489	2331	6081	2543	3381	240	7859	2580	9323	8728
4191	3695	2157	9194	8010	227	2021	4516	4634	3507
9000	2315	8129	3420	961	4098	6953	7067	6847	1779
6612	1631	1008	9291	7707	4803	5337	3289	9462	2384
7279	3182	9847	8918	2993	6956	4738	3469	6229	5551
9769	8893	4709	4754	9808	9226	7051	9852	2234	6041
4555	4531	1417	880	3377	1753	3097	7133	3893	589
8568	952	5307	9253	9842	7086	4798	818	8219	1722
1740	4343	9930	707	8809	402	3782	7758	3019	6245
6963	3506	973	2078	6448	2509	3893	6200	4658	1567
9214	2966	9313	8961	6788	3834	8633	485	9009	7956
4325	4352	5387	5069	6011	3366	3381	9657	2038	8948
8532	1614	2825	7883	8199	4916	4179	8892	4431	2003
9249	2402	2794	7889	9033	3102	5177	4205	2631	1167
5888	9683	9633	4242	1584	9796	8346	8550	6831	4556
4765	3747	8337	9688	8456	2356	2160	2679	2790	920
9442	1425	8183	6203	7455	9465	8272	6081	4008	8041
199	952	4526	1457	1423	7790	2323	8482	6727	5207
3896	8778	357	4118	2255	9583	9447	4878	2611	4144
6161	7998	5958	9618	7226	1800	7346	8444	773	6622
6895	3405	1655	1422	2842	2874	7677	4910	7174	8975
394	9550	5640	7642	5409	3043	5190	5809	8340	8165
3136	7228	3876	8049	3587	4627	6598	290	7946	2214

3483	9461	7529	8749	9267	3927	3583	7671	7081	9033
3284	7015	8044	5057	9454	8101	4722	4517	7120	8265
4633	9699	1146	8989	1223	7519	4515	7386	970	5032
6060	4807	6554	5354	9677	2920	7259	9582	4329	3729
9025	7102	5379	6231	7826	2472	9058	8776	1296	3552
3105	2241	4775	1727	7881	5624	9193	1335	3509	1721
9468	1653	9823	6893	3340	1069	7188	5152	1808	9269
7478	3057	3601	9579	5764	8144	7342	9805	4501	9888
6338	6175	3280	8417	2169	1264	8409	2472	4479	2990
7911	4346	5671	8047	8697	5783	397	9391	3986	5071
1042	3633	265	1823	1603	441	4320	2165	3645	2330
2160	3325	9257	9429	2859	2864	7170	89	1626	4013
9479	4462	7643	4869	7609	4371	3472	5429	7486	9122
4075	2694	5044	3086	4748	325	4531	7179	8508	5595
3246	2590	4737	2610	7663	1372	2134	7045	7088	4747
255	3866	2291	6249	5203	5785	7769	3049	6267	6424
7569	5077	1537	8427	5850	7806	1817	3022	4585	801
3366	3626	2105	390	1267	2905	7372	1078	6477	7812
6185	6547	848	4793	6720	7368	5670	2484	3087	8771
528	6002	6814	8089	529	3069	7447	7737	1187	8435
4671	5830	1511	9342	5636	2803	7110	1015	2401	8638
6335	7407	5675	1567	3787	8694	2271	5349	6698	3242
4955	8490	1030	8035	4590	5004	5292	7808	5778	2587
1402	9346	8397	306	3138	3716	8708	4166	3954	5382
4972	5156	7236	3465	3727	647	3278	6612	4155	6240
8523	9229	9216	1429	3877	3040	3469	8686	139	4222
8732	1830	9836	2597	72	5783	6019	5612	5640	6082
9817	6093	5510	2753	9785	9009	5463	9394	7360	8728
3282	4601	3955	4504	6169	9072	6499	1170	9227	8015
9465	4281	6175	4707	2688	9191	4712	7331	5506	1786
207	7422	9043	4873	2640	4567	9663	2455	2957	8183
7896	4367	6269	3513	8384	6018	563	5173	7655	7222
843	7883	7743	347	9890	224	4987	4271	8033	3535
4527	6881	5635	4319	2307	5087	3194	4749	7634	7608
5237	2152	579	1991	5435	4567	9780	3610	1601	5747
7423	631	499	9209	9522	5168	3636	7151	590	7122
6455	6498	3589	3435	4605	173	6609	1743	2205	8467
9534	3665	8284	1203	4930	9205	8802	7874	8687	13
2942	9079	7247	5476	3581	8896	9403	1888	3123	4026
2183	1167	7103	1836	779	1873	9249	5651	5278	1488
2910	1904	6283	5215	5031	9	4298	2755	94	2058
8231	848	2693	5718	9842	5474	8676	9908	2174	4037
6009	9152	1277	3973	7802	8683	1759	514	1155	8685
7973	2609	6749	2261	3875	2226	5366	8003	5860	8525
8739	4260	4114	4628	3419	8476	9290	982	7576	1194
2539	5540	1909	596	8215	7245	7083	9686	9771	5565
1350	4470	679	5035	3365	7751	3385	76	6129	9387
622	1542	9869	136	4612	2756	2134	2435	989	9001
5275	7726	5387	708	2390	6192	2165	6830	4178	1009
5635	1125	359	5470	5710	337	603	7604	963	9520

1114	3127	3418	5973	4319	3858	598	9526	309	4940
1168	3168	9971	494	5659	4246	971	3541	1125	2715
9022	3223	7749	9182	8097	1414	1708	1722	4513	2067
7840	6708	1066	2957	2905	5125	8625	8112	5494	2122
3865	5602	9383	3765	3064	6499	8375	1250	3126	7
1921	9028	2256	6850	2087	9617	3972	9295	3643	4043
9348	2402	324	3179	3686	7373	1577	1447	5028	4103
5320	619	3178	6299	3519	7713	9160	8763	8630	7203
6208	2720	206	4037	5221	1274	2206	199	6836	3373
2813	3789	7562	885	9800	5864	3625	9639	5751	6527
1472	1548	8670	7984	3077	1171	4786	8572	6064	6320
1600	7982	9813	8578	462	151	9962	5831	9236	6591
4995	5174	6844	9093	9814	810	2734	7085	2491	7785
5573	1094	1604	8683	6715	71	2842	6628	5226	6545
4787	4221	2538	9853	5057	4242	5999	3921	9229	4261
1889	2343	6207	3487	9692	9727	4967	6484	667	4552
8841	4605	5016	5019	4774	2256	3203	5629	6209	1344
8208	8475	9541	3532	6777	9473	5298	6140	8955	6035
6471	3824	6452	8898	7682	4371	1638	7104	84	3233
220	1369	8189	7660	1883	7312	6034	7533	4463	6296
1365	6257	8428	7844	7744	1334	9725	3891	5774	465
296	1326	5845	5293	6792	5588	6086	1146	9293	4277
434	7395	3091	6028	2998	9276	7804	6125	6142	8296
9401	6598	952	4573	1910	4777	15	726	6870	544
3677	3176	9817	8765	2208	2956	4353	9638	7536	4401
5597	5942	9488	6326	6057	2413	1688	6544	8237	8748
1556	6841	9466	3955	2064	1761	6008	6038	177	820
3778	7261	8153	9997	6140	1463	1120	4617	8160	6161
7603	1989	9816	8432	8920	8391	974	9799	3630	1322
2469	1616	4439	3981	8820	8676	6247	5559	9402	5032
5254	6746	6093	2262	299	6419	6716	6674	8846	1598
4812	8162	1309	9029	7544	9723	8607	2995	4774	2850
9148	233	3614	301	2657	9043	4004	3962	9503	5968
2102	1805	5477	9648	9536	4158	3166	7697	7822	5792
2354	8734	8489	6537	3133	7905	707	9431	6630	522
9467	1622	9521	4665	8615	9516	9777	9871	4270	5903
2284	5256	5446	3043	4277	6685	9909	1949	1758	8852
4567	4350	9312	4376	948	71	7005	8269	7554	8813
9272	2395	2145	1560	1979	772	8243	3446	5073	2825
1412	3481	9498	7956	2098	2074	8290	1034	3089	5026
3033	4673	885	2022	8095	392	1524	5441	6307	7035
2665	766	1020	1049	4973	3503	706	9475	7097	4096
3519	2779	9806	8567	504	866	6052	8865	7353	1886
5032	3172	5902	9710	9539	2625	7780	2163	7131	7215
3876	8386	6948	9828	4564	9931	5197	3677	6839	6458
3605	4592	5793	3125	6405	5924	9115	3050	2629	25
4508	4447	1774	6560	1228	8283	2120	4114	8145	8589
2259	7850	2001	3768	7639	2178	797	3508	5141	3700
8468	2173	21	5880	8277	5767	738	3205	3596	5840
8480	8802	5999	9941	9427	5752	1828	4475	9047	8586

9674	2084	8980	7694	2424	1895	8301	5635	8815	7259
2207	581	637	1836	2428	8376	3054	1127	4914	954
6668	2829	1583	5085	1274	5604	4182	1703	2471	2136
9569	2278	3553	8577	6941	4988	6344	8744	827	9659
5917	7680	8874	6719	5342	5430	739	1639	7912	8144
3622	2605	5502	9880	1243	5406	2984	4692	2307	5757
9882	4881	1760	5567	1670	7512	3367	5860	4406	7560
5436	5350	7605	2284	2700	9905	1533	7702	8692	4366
6343	4270	4124	4484	1724	5120	8094	2934	6983	6474
1450	9650	2735	6090	2524	2973	6618	1852	3064	4331
6714	8852	676	5450	7585	9596	6322	3318	5112	8166
3857	4396	7539	5474	6226	5807	1412	8940	4099	7481
2328	6324	4136	5507	1660	8911	7593	3154	1692	8072
8412	2312	2821	396	3425	4340	7766	9160	7454	5530
8935	1102	7627	8709	6397	6239	2476	8979	5097	3999
2549	5500	1278	5273	768	5846	9240	6254	1528	8909
891	6164	9372	9605	1737	7232	8886	8042	8258	1535
8888	502	2812	5554	5229	3424	3517	9567	7728	8097
7766	5221	8061	82	9298	908	6628	3572	10	799
7715	7180	8915	9637	3484	3902	1923	1668	8592	4219
7378	8294	8495	7588	3504	5333	5712	3802	5203	6972
9625	1950	8854	9794	6582	962	5053	6470	8375	1984
459	4987	8372	9047	1170	5513	5862	786	1293	3274
404	2175	1642	2028	9223	1530	4727	9014	1959	4245
3461	8485	8315	1014	2254	7174	5388	4513	413	1308
2747	4770	9028	1027	4542	9732	3764	4332	9203	3730
7215	8890	8511	2855	5772	6341	9098	2461	7148	9939
677	8294	6000	2654	6531	8960	6309	9802	3081	3749
450	783	6559	6009	6114	895	6098	8597	3507	147
3779	4099	6510	2618	3429	8842	2692	5854	1227	5907
8390	6216	2403	8631	6232	6540	9586	2347	3817	9504
9592	8325	3441	6275	6706	171	4062	6330	1741	9144
7914	530	7440	1147	5450	5827	2004	4363	3530	6205
3791	2782	3026	717	1501	7080	3274	5722	5368	624
2029	4690	6180	4538	865	5179	159	2116	7175	8838
8999	9018	5201	6566	5617	2019	9764	7152	7409	5284
7616	4045	53	9391	2586	1081	6164	4605	1943	2493
4347	6132	2646	3160	5433	5324	7402	904	3969	7095
1707	9691	4229	1	4289	2856	1315	1752	4631	2493
9145	9111	2483	7042	8350	7430	5548	9713	8413	1310
2762	4863	9568	4103	1827	5696	1266	260	939	2876
5303	749	5865	9925	2615	8022	4802	7517	5121	3273
2885	5017	3042	4992	3868	3881	2101	3988	7348	3781
4097	6440	1956	8556	6656	3658	181	5346	8923	5564
2564	6536	1251	9110	9810	343	8172	3138	7065	2183
5198	7398	4017	5154	1257	3714	5711	4258	9801	1540
373	5222	2894	8380	1452	5013	3813	2811	2771	7426
4974	4093	6568	3341	9214	8601	5655	1513	3741	9563
2109	2001	7288	2835	6149	602	2276	7706	155	8891
5023	7955	3962	736	8307	46657	8883	2389	182	8464

9112	9514	7321	5347	448	764	6515	6036	7468	3770
989	5641	1666	5636	4709	6184	4093	6323	913	1038
7546	9508	6420	6492	4409	1791	7672	1938	7581	7358
4037	6411	3175	1457	5190	5465	4893	2293	596	8618
1268	7212	416	3858	8172	5267	8361	1932	286	4547
8310	9419	6433	8856	7721	5799	4961	4618	2148	6030
6586	5106	6399	6337	3380	5366	9138	7228	3814	7432
8976	3943	5028	1704	1346	843	4766	6589	6719	2461
6629	4766	1937	199	3569	697	7734	9918	5817	215
6727	1881	637	9336	7422	817	2605	5617	1050	56
4310	1700	9250	9994	8674	6879	1934	7364	5291	8813
5836	8039	4473	3742	5592	2371	3909	9807	346	8278
4129	4346	225	3580	178	2267	8199	5316	8176	8854
4136	10	6689	6632	9098	5149	4085	2130	9160	8330
4292	4665	9346	6829	4623	5498	9401	6565	611	1979
4519	5700	4004	7541	5288	4357	1357	4632	2401	8191
1875	1983	2938	9793	4461	9779	6265	8173	5095	6622
8835	2791	7017	388	8459	4881	7337	1325	9820	5054
5037	4023	4298	2396	6501	5093	8391	6581	6022	5683
6277	688	9939	2180	3325	8747	4339	4707	8590	8224
7488	9281	5598	3937	9417	5739	1962	6139	2327	9782
9630	1750	6752	3762	8802	3970	9632	7063	9836	1763
1727	3184	8656	6946	3053	6982	2492	2856	6239	997
3979	4849	9004	8801	2913	9099	8147	3992	6223	2435
8757	6688	7942	2208	3525	35	2230	1413	8361	8278
3752	554	1729	3417	942	3992	6360	3796	8965	4743
3282	4249	421	7987	9333	3640	3077	9749	566	1935
5187	3492	5245	5133	195	3622	1325	2699	3859	1109
4607	8329	8099	2747	4986	1178	7120	1745	9452	892
2597	3673	1790	6074	5982	7967	121	2024	7210	1498
4734	9873	375	6925	9861	5469	8157	4826	4327	2624
8043	4834	7243	1574	4662	7273	6161	9779	3751	3015
6379	8405	4568	5551	1288	4101	8804	5508	4966	1941
5263	4100	9415	1626	890	8239	129	5316	9922	6296
4910	1696	4216	9751	2091	7134	9057	2206	5621	1050
9975	3502	5639	8838	7389	2923	4505	1975	7111	1721
9418	1148	6016	1449	4075	4530	3410	828	3027	9559
9913	148	3652	2819	6889	8416	1931	8900	726	4759
9432	5332	7511	1796	187	6959	4895	4975	7374	9357
9203	8106	983	7167	7075	1577	8887	9437	2192	5979
4983	347	8881	138	9337	9909	5650	8775	6492	5524
2940	1287	9368	1486	654	9379	7429	9799	2252	7535
9030	1920	3457	6556	9118	7283	4875	6660	4722	714
9072	2869	1882	7096	3908	1665	8953	7900	5168	4166
2459	427	2798	7285	2903	6887	6280	623	9225	6659
5955	3069	1810	1358	8331	9351	5233	8551	4679	3013
3158	6242	3463	8564	9059	6488	8398	1766	7689	2742
5187	3315	3469	1795	1227	7389	3216	7424	3840	2791
1887	9102	3824	687	1256	5376	2358	9165	2691	7787
578	1092	6474	7421	2357	8023	1304	2471	2090	9119

8938	1399	538	341	111	2577	2982	5374	9187	7505
5366	6034	6183	958	5010	6137	6113	7698	4152	9061
6811	1576	5491	5494	7653	9165	323	4094	2860	6256
1045	4044	4296	1851	1103	4752	9931	492	6647	4158
5401	50	5468	3399	7329	8323	9990	1808	8328	8061
2402	2493	4860	6268	1167	4956	380	9903	9509	7516
7422	6323	7658	8501	3562	3095	1882	1448	7423	8021
4633	5798	2146	6498	1327	817	5000	9559	570	6732
3052	2219	5880	3306	6063	7977	8180	2355	9046	1580
9642	6919	8140	8414	646	6090	4739	5141	2925	718
4037	2412	3180	1492	5411	6800	2713	7116	3321	5291
9885	6578	9639	1942	3430	5735	1596	2585	5934	4710
8741	9657	8025	8824	7614	5541	5059	2052	4032	9018
9370	8243	8177	5679	2356	1579	6892	9427	1969	4011
869	8412	2397	3658	6646	5015	3978	4405	4588	5737
2661	3180	5262	3110	9540	7641	7900	798	2273	3269
5850	6768	1430	5095	5198	4600	6056	5539	3984	1362
4015	6107	676	4081	3896	6924	1834	5238	6529	4334
121	2846	5421	3065	5107	4432	6648	5672	506	3266
9993	8263	2803	1449	4397	7734	7408	722	2004	1990
9787	8104	6351	902	228	9721	1500	1968	2164	2427
162	929	5231	9089	103	3805	5476	9630	9387	3109
6394	6212	2250	7198	5708	7136	8642	8014	4071	353
1753	8695	3106	3670	9055	8784	1462	5022	3657	1025
8804	2415	4038	9986	8906	9409	1421	8981	4276	8228
5375	8036	5978	8887	9407	1876	3582	8918	9615	3177
1401	4571	683	2554	8445	591	4781	3030	769	1938
142	2967	6124	7049	7394	7695	2089	8515	2921	6314
113	3265	9805	6425	9126	60	8151	5742	3647	2901
7840	5857	2566	9216	8003	9609	6014	9913	8764	9809
8993	4690	2056	3310	1695	4193	9546	634	7674	883
6975	7668	2299	1294	5450	2141	5157	8044	1499	3881
1325	6206	8924	4079	7689	4897	6748	5042	1726	1198
8815	8182	1432	9764	1831	4208	6294	7724	9889	5773
509	751	4783	9043	848	2387	2661	6939	2847	4998
8797	3019	245	6969	3549	1257	3843	6986	3783	3177
7197	2526	5325	97	7835	5912	3227	4458	3899	7538
7893	473	7395	2126	6375	585	6426	128	9368	463
421	262	5719	1521	2238	4342	7476	6197	5056	5621
9801	7478	9745	489	1262	396	2407	4152	1330	9495
1693	9544	3110	2483	7087	8779	606	6577	605	1621
1078	251	5561	9329	4264	9394	7335	8494	1545	3095
2310	5707	9323	548	2391	196	2172	6811	3804	7766
2556	1397	60	5668	5167	9947	292	4247	5163	5443
5357	7481	875	1728	5399	773	2763	8286	1776	608
1673	1538	3537	6914	699	4133	3862	5273	6179	9962
5135	2304	4649	8881	2590	3852	3771	1395	9670	1833
6557	9750	3559	1841	9424	8212	6521	9890	5873	1484
7998	2882	8856	6503	3626	3676	6104	9119	8584	7860
3986	3362	3964	5579	6679	7307	6072	8052	8706	5750

9836	4604	131	6202	8741	2348	4966	911	4967	6875
4581	3917	4646	8532	9166	8358	4416	5196	1545	5531
6690	8612	8874	3415	2307	7672	9048	8671	503	8241
9836	2326	7356	5395	53	5647	5135	171	3320	8924
6229	9193	6199	2194	6565	1788	3757	2863	4701	5440
6854	2537	4013	6703	6700	9415	6632	928	3482	1615
9078	407	7101	827	749	6805	9321	3071	7678	9984
7885	9238	5253	1571	4370	4405	4804	7896	8857	1165
228	3139	5693	8443	2091	9819	5904	3546	7862	9958
3039	1418	8200	6553	519	1347	489	1200	9761	7604
2008	9985	9636	6735	6439	6004	9064	521	8616	3117
5774	9806	3695	1793	5553	699	8165	4164	7498	883
1372	1640	2101	1	7472	4700	188	4372	9002	709
2026	2512	4468	1883	7128	4148	3637	1751	6579	1993
5456	4729	896	715	4755	9664	7750	5893	5178	4455
5077	9391	6991	5115	6382	5925	9701	8882	6284	778
668	7230	5597	5204	2103	907	6493	2247	153	5338
9541	1952	982	1025	5685	1214	15	9782	7430	9754
1778	3927	4811	9928	9000	1792	2921	4393	897	9150
9059	1830	1818	2425	8786	7232	2661	5797	1440	9476
8745	555	6905	5170	9057	1313	6684	4015	3033	9941
3568	7152	2314	4330	5450	6240	6134	5345	87	7246
274	1570	8845	9186	739	7720	8730	4285	4594	8811
3259	2311	1625	8459	3954	8061	1746	5917	5515	7220
4322	2702	8965	2098	6839	5930	8322	4964	1581	1712
7578	2970	247	8224	6051	4894	7668	4310	1395	6193
7056	5723	816	5087	457	7372	2299	8679	9315	6177
8875	4322	1346	5391	253	7743	1109	7507	7332	5629
2983	9099	6417	6686	6437	7210	1165	1393	4798	3153
1575	6929	9906	5821	556	27	6357	2882	9877	6717
237	4448	8541	4205	8524	100	7888	6379	6585	6359
8964	653	2432	7976	8957	160	7666	2640	4753	1510
6273	4973	2893	4605	3704	1911	6502	7245	9898	7842
956	3510	1185	4101	1368	1143	7228	3685	6158	9439
428	8298	2279	5347	6476	1080	8880	1798	5959	4644
7458	8466	8192	261	7800	1473	9714	311	254	4746
1103	2371	6132	2034	7037	9523	9289	4801	5781	7771
3178	7495	5503	7651	8919	7910	6117	3412	1195	6643
6546	9366	4	5871	8606	9272	7574	3927	9904	859
992	8425	9448	3854	2327	6904	874	6116	9315	235
9462	8745	889	261	381	7263	3100	9433	6806	2240
2239	6384	7859	8966	3189	7726	7518	2029	2322	2501
6943	6906	5472	2068	3865	6941	2792	4379	3978	298
3536	7890	502	7761	5063	6593	9332	8492	1620	3896
8451	7097	9677	9348	1532	1620	7893	8422	6887	8317
979	1869	4206	5318	8031	7352	2735	3549	7108	2354
5836	9503	9118	3604	8084	740	5300	4484	2331	1214
3852	8173	5412	9781	2504	501	2404	1519	5071	2741
623	7689	1308	848	5768	6478	581	3844	3895	2857
1181	368	4139	2178	8307	8603	8345	8367	5025	1070

5057	3819	1750	2026	6501	4357	1040	1452	8517	8869
5759	5857	4589	9464	9900	2392	6409	4286	2615	9001
4636	1315	7248	9600	4779	7790	8427	9507	4377	6093
1495	2628	8891	3213	9843	8107	4985	7156	6935	450
1114	9894	1068	3332	6603	2728	2175	3599	1613	6153
1201	8174	1698	2634	3873	2868	1852	6819	1880	8323
6221	4134	5793	4574	917	4818	5241	1961	8582	6771
3168	2384	4644	6831	2190	1120	6434	6323	2379	5705
7565	3011	988	4600	1279	7793	5946	4632	7658	760
6145	2451	876	7473	2829	1466	3923	2571	7630	2023
9464	4066	4044	8785	6758	7935	394	5567	5805	8872
3589	4089	1153	9304	4202	9409	9026	5036	4689	994
2698	2125	3780	4681	2289	5857	1345	7002	6399	8925
9276	9616	4258	2166	5197	7824	8308	7474	7027	3406
8392	8752	7708	8268	9971	2993	647	1622	42	9872
7650	9694	5679	4441	2422	3193	1364	3801	3907	4021
2539	4850	5021	8958	4041	6463	3590	4311	3353	5734
3513	1765	9825	4111	5468	1903	2314	5555	7704	8150
8882	5077	8705	113	3509	2251	4785	1559	5957	584
6911	4502	2240	9828	2287	7153	4346	4617	7514	9700
9152	9016	1356	8160	7686	2860	6429	2792	7179	1982
335	3794	9554	692	8058	3275	1299	1114	8661	8740
876	250	582	9566	1101	1861	1074	4200	5157	6551
6586	2082	6168	9635	2138	497	1511	2676	8979	2876
4269	781	1077	1246	5519	4023	2242	1841	2365	7604
6920	9089	7885	1609	8971	9472	427	7463	3958	2986
911	4453	1753	6190	8069	5924	7518	7075	2788	1004
334	8236	3988	3975	48	1091	9692	9642	4117	117
8223	9310	7511	2349	5697	8239	9960	3622	7222	1666
6095	9288	500	2780	5291	3399	1722	2230	9234	6581
4959	5052	6539	9093	7444	7105	4942	1800	4440	9387
2874	4045	8596	4838	3462	3653	9981	8479	5255	558
4197	8016	5220	1777	7268	8251	801	1724	7202	8916
9101	8095	3418	1794	2466	9810	6448	9223	1032	9739
1583	2362	4028	1211	1408	3809	2876	3526	3359	5439
394	7962	9765	8577	1643	2010	9012	9853	3216	5819
7784	2362	9014	1087	5515	7970	1815	8889	3513	2901
1168	9161	2397	4936	9424	840	2786	6859	8936	7882
5406	6990	4741	2658	8039	3925	8256	4439	7983	8838
8794	6980	9946	4961	944	5416	550	87	7115	8974
1858	4223	5781	2213	7607	742	7236	3798	7060	5641
9905	8028	2649	5771	1490	610	8840	3154	526	6404
884	8723	5122	3143	3371	5123	6942	1334	9777	4415
9723	6849	5402	2793	2876	8930	7394	682	1966	2592
6763	2822	9121	659	8568	9187	7660	6920	7689	3874
6499	8137	8871	5291	1116	8886	944	7275	9136	9481
6403	6992	9824	3438	8768	1726	8040	7239	1391	2922
4442	1370	2634	2086	5001	7863	3598	9407	4102	5836
5812	2210	6801	2758	7555	6591	7020	5427	8753	1857
9732	891	5590	3620	6431	3807	7284	7656	4435	2957