

# **PROCEDURES FOR CONDUCTING A SAMPLE SURVEY TO DETERMINE WHETHER THE MAJORITY OF PERSONS IN A TARGET AREA HAVE LOW- AND MODERATE-INCOMES**

## **INTRODUCTION**

The purpose of a sample survey is to ask questions of a portion of the population in order to make estimates about the entire population. If we ask proper questions of a randomly-drawn sample of adequate size, we can be reasonably sure of the degree of accuracy of our overall estimates. In the survey that is discussed here, we are seeking to determine whether at least 51 percent of the persons living in a target area have low- and moderate-incomes.

## **STEP 1: THE QUESTIONNAIRE**

The questionnaire developed by ECD must be used. The central question in this survey is whether the household being interviewed has an income that is below the low- and moderate-income level for households of the same size.

In proceeding, the interviewer first should make contact with someone who is qualified to speak for the household. After making contact with the head of the household, the spouse of the head of household, or someone in the household who is mature and knowledgeable about household income, the interviewer should introduce him/herself, identify the purpose of the study, and solicit the participation of the respondent.

You should bear in mind that questions about income are rather personal. Many people are suspicious or reluctant to answer questions about their income -- especially if they do not see the reason for the question. You should know best how people in your community will respond to such questions. With a proper introduction that identifies the need for the information, you can generate an adequate level of response.

## **STEP 2: SELECTING THE SAMPLE**

In selecting a sample of households to interview, there are a series of steps that must be taken. First, you must define the group whose characteristics you are trying to estimate. Then, you must determine how many households in that group must be sampled in order to estimate the overall characteristics accurately. Remember to make some allowances for households who, for whatever reason, you are not able to interview. And, finally, you must actually select the households from which you will try to obtain interviews. This section discusses each of these steps.

Defining the Universe. In sampling, the large group whose characteristics you seek to estimate from a sample is known as the universe. If you are trying to determine the proportion of households in a neighborhood with low- and moderate-incomes, that neighborhood is the universe. Instead of a neighborhood, the universe may be a town, it may be as large as a county, or it may be defined some other way. (FOR

PURPOSES OF THE CDBG PROGRAM, YOUR UNIVERSE WILL BE THE AREA THAT IS TO BE SERVED BY A CDBG FUNDED PROJECT.) But before you can draw a sample, you must clearly define what area you want the sample to represent. Let us assume here that the universe is a neighborhood that contains about 400 homes. You will sample from the 400 households residing here so that you may make estimates about the incomes of all the residents of these households.

When you have defined your universe, you next need a method of identifying the individual members of that area so that you can sample them. Ideally, for a given neighborhood, you would have a list of every person living in the neighborhood and perhaps their telephone numbers. Then you would devise a procedure to select randomly the persons you wanted to interview. In reality, you will not have such a list available and you probably will not even have a list of all of the households in the neighborhood, so you will have to improvise a little. One way would be to go to the neighborhood and randomly select which homes to go for an interview -- the advantage of this method is that the houses are there, so you can go right to them instead of using a list. After collecting information on the various households, you then can make some estimates about the number of people in the neighborhood and their incomes.

How big a sample? After you have defined your universe and identified a method for identifying individual households in the universe, you must next determine how many households to select. After you have developed the procedures to select the households, you must use Table A below to determine the minimum number of households you must interview to obtain a survey of acceptable accuracy.

TABLE A  
REQUIRED SAMPLE SIZES FOR UNIVERSES  
OF VARIOUS SIZES

<u>Number of Houses</u>	<u>Response Rate</u>
0 - 49	89%
50 - 99	80%
100 - 249	73%
250 - 499	55%
500 - 999	34%
1000 - 2499	24%
2500 - 4999	13%
5000+	5%

Unreachables and Other Non-Responses. It is important to realize that the sample sizes in Table A indicate the number of interviews that you need to complete, and not necessarily the size of the sample you need to draw. There is almost always a difference. No matter what you do, some households just will not be home during the time you are interviewing, some probably will refuse to be interviewed, some will terminate the interview before you finish, and some will complete the interview, but fail to provide an answer to the key question on income level. In order to be considered an

adequate response, the interview must be conducted and complete and accurate information on the respondent's income level must be obtained.

Drawing Samples. In sampling you are looking at a portion of everyone in a group and making inferences about the whole group from the portion at which you are looking. For those inferences to be most accurate, everyone who is in the group should have an equal chance of being included in the sample. For example, if you are sampling from a list, using a random numbers table (one is included as Appendix A.) will provide you with a highly random sample. To use a random numbers table, you take a list of your universe and chose the households to be interviewed from the list according to the list of numbers in the table. If, for example, the first three random numbers are 087, 384, and 102, you would go through your universe list and take the 87th, 384th, and 102nd households to try to interview. Continue until you have achieved the desired sample size.

As indicated above, when sampling from a list, you should always oversample. Then, if you encounter unreachables, you can replace them with households in the oversample list in the order they were selected. For example, if you draw a list of 300 households in an effort to obtain 250 interviews, the first household you write off as "unreachable" should be replaced by the 251st household sampled.

If you do not have a list of all the households in a target area or group you are trying to measure, but you know the geographic boundaries of the target area, you might randomly select a point at which to start the selection of households to interview and proceed systematically from there. In a hypothetical 100 household neighborhood, in trying for 61 interviews, you would need to interview every 1.6th household (100 divided by 61) to ensure that you would cover the entire neighborhood. In whole numbers, this works out to about 2 of every 3 households. Therefore, you could start at one end of the neighborhood and proceed, systematically, through the entire neighborhood, interviewing two households and then skipping one. Any household selected by this procedure for which an interview was not possible would be replaced by the next household you would have skipped. If the sample size called for you to sample one of every six households, you might draw a random number from one to six and start at that household and every sixth household after it, replacing the unreachables with every third household in the six-household groups.

You will achieve a more accurate survey result if you are not too quick to write off a household as unreachable. You are more certain of randomness if you obtain interviews from the households initially chosen by the sampling method. If you are doing a door-to-door survey, you probably should make two or more passes through the area (possibly at different times) to try to catch the targeted family at home. Frequently they might be busy, but say that they can do the interview later -- make an appointment with them and return. Only after several tries or an outright refusal should a chosen sample household be replaced.

### **STEP 3: CONDUCTING THE SURVEY**

To carry out the survey, you will have to reproduce sufficient questionnaires, recruit and train interviewers, schedule the interviewing, and develop procedures for editing, tabulating, and analyzing the results.

Publicity. To promote citizen participation it may prove worthwhile to arrange some advance notice. A notice in a local newspaper or announcements at churches or civic organizations can let people living in your target area know that you will be conducting a survey to determine area income levels. If you let people know in advance how, when, and why you will contact them, usually they are most willing to cooperate.

As with all aspects of the survey and questionnaire, any publicity must be worded so that it does not bias the results. For example, it is fine to say the community is applying for a State CDBG grant and, as part of the application, the community has to provide HUD and the State with current estimates of the incomes of the residents of the target neighborhood. It is not appropriate to say, in order for the community to receive the desired funding, a survey must be conducted to show that most of the residents of the target area have low- and moderate-incomes.

Interviews. Anyone who is willing to follow the established procedures can serve as an interviewer. It usually is not necessary to go to great expense to hire professional interviewers. Volunteers from local community groups will serve well. Also, schools or colleges offering courses on civics, public policy, or survey research frequently may be persuaded to assist in the effort as a means of providing students with practical experience and credit.

Generally, it is best if interviewers chosen are those who can make the respondents feel most at home. When interviewers are of the same race and social class as the respondents, the survey usually generates a better response rate and more accurate results. What is most important, though, is that the interviewer will command the attention of the respondent, ask the questions as they are written, follow respondent selection procedures, and write down the responses as given.

Contact and Follow-Up. Interviewers should attempt to contact respondents at a time when they are most likely to get a high rate of response from most types of people. Door-to-door interviews might be conducted early in the evening (especially before dark) or on weekends. You should try again at a different time to reach anyone in the initial sample who was missed by this initial effort.

In general, you should know the best time the residents of your community and when they can be reached. What you should avoid is selecting a time or method that will yield biased results. For example, interviewing only during the day from Monday to Friday probably will miss families where both the husband and wife work. Since these families may have higher incomes than families with only one employed member, your timing may lead to the biased result of finding an excessively high proportion of low- and moderate-income households.

Of course, in making contact with a member of the household, the interviewer first has to determine that the person being interviewed is knowledgeable and competent to answer the questions being asked. The interviewer should ask to speak to the head of the household or the spouse of the head of the household. If it is absolutely necessary to obtain an interview at this sampled residence, the interviewer may conduct an interview with other resident adults or older children only after determining that they are mature and competent to provide accurate information.

As part of your questionnaire, or at least as part of your training of interviewers, you should develop an introduction to the actual interview. This should be a standard introduction in which the interviewers introduce themselves, identify the purpose of the survey, and request the participation of the respondent. Also it is a good idea to note the expected duration of the interview to let respondents know that the burden to them will be minimal.

You should emphasize to the respondents that their answers will be kept confidential -- people are more likely to give you honest answers if they will remain anonymous. You should do your very best to maintain this confidentiality.

Interviewers also should follow the set procedures for replacing "unreachables" (as discussed above in Step 2). If they must write-off an interview, they should not say "Well, I was refused an interview here, so I'll go over there where I think I can get an interview." This type of replacement procedure is not random and will hurt the accuracy of your survey results.

The Interview. Interviewers should read the questions exactly as they are written. If the respondent does not understand the question or gives an unresponsive answer, it usually is best to have the interviewer just repeat the question. Questions should be read in the order in which they are written. The respondents' answers should be recorded neatly and accurately immediately as they are provided. If you are using this survey time to get other information, in addition to the survey data, please make sure the survey questions are answered first. A premature ending to an interview might leave you with an incomplete survey. At the end of the interview, and before proceeding to the next interview, the interviewer should always do a quick edit of the questionnaire to be sure that they have completed every answer correctly. This simple check helps avoid the frustrating mistake of spending the time and expense of conducting the interview and not getting the information you sought.

Editing. Interviewers should turn in their completed surveys to the person who will tabulate and analyze them. That person should review each survey to ensure that it is complete and that each question is answered once and only once in a way that is clear and unambiguous. Questions or errors that are found should be referred to the interviewer for clarification. It also may be desirable to contact the respondent himself to clarify incomplete or ambiguous responses. Note that editing is an ongoing process. Even after you have started to tabulate or analyze the data, you may come across errors which need correction.

## STEP 4: DETERMINING THE RESULTS

After you have the data collected and edited, you need to add up the numbers to see what you have learned about your target area. Actually, it is useful to think of this in two parts: (1) tabulating the responses from the questionnaires and calculating an estimated proportion of low- and moderate-income persons; and (2) determining the accuracy of that estimate.

Analysis. The estimate you reach for the proportion of residents who have low- and moderate-incomes will be just that -- an estimate. If you have done everything right, including random selection of the required number of households, the estimate should be reasonably accurate. If by using the procedures specified here, you come up with an estimate that 55 percent or more of the residents of the target area have low- and moderate-incomes, you can be pretty sure that at least 51 percent of the residents actually do have low- and moderate-incomes. You can skip over the rest of this section, and go down to STEP 5. On the other hand, if your estimate is that less than 51 percent of the people in the area have low- and moderate-incomes, the presumption is that the area is ineligible as a target area.

This section is intended for use only by those whose survey results indicate that somewhere between 51 and 54 percent of the residents of the target area have low- and moderate-incomes. If your estimates were in the 51-54 percent range, it is probable that a majority of all neighborhood residents have low- and moderate-incomes, but there is less certainty than if you had come up with a higher proportion. The closer your estimate is to 51 percent, the less certain you should become that the area is low- and moderate-income.

There are a couple of additional analyses you can make to help determine the extent to which your estimate of the proportion of low- and moderate-income (LMI) residents is correct. First, compare the average sizes of the low- and moderate-income households. The closer these figures are to each other, the more confident you can be in your estimate. (For example, if you estimate that 53 percent of the residents have low- and moderate-incomes and you find in your sample that both LMI families and non-LMI families had an average of 3.4 people, you can be sure that it is a LMI area.

A second simple calculation is to arrange your data into a table similar to that outlined below in Table B. This table enables you to compare the distribution of family sizes of families with low- and moderate-incomes with those that are above low- and moderate-income.

In completing Table B, you would count the number of low- and moderate-income families in your survey that had just one person in the household. You would enter this figure under "number" across from "one". You would proceed to enter the number of low- and moderate-income families with two persons, with three persons, and so forth through the "nine or more" category. Adding up all the entries in this column, you enter the sum across from "total," which will be the total number of low- and moderate-income families from which you obtained interviews. Then, considering families that are

above low- and moderate-income, you follow the same procedures to complete the "number" column for them. For each income group, dividing the number of one person families by the total number of families in that income group and multiplying it by 100, yields the percent of that group that are in one-person households. You should fill in the "percent" columns, using this procedure. Each of the percent columns should total to 100 or so allowing for rounding errors.

TABLE B  
TABLE FOR COMPARING THE DISTRIBUTION OF  
FAMILY SIZE BY FAMILY INCOME

<u>Number of Persons in the Family</u>	<u>Families with Low- and Moderate-Incomes</u>		<u>Families Above Low- and Moderate-Incomes</u>		
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	
One					
Two					
Three					
Four					
Five					
Six					
Seven					
Eight					
Nine or More					
<hr/>		<hr/>		<hr/>	
Totals		100%		100%	

When you have filled Table B with your data, compare the percentages of LMI respondents with the percentages of the non-LMI respondents for each family size. The closer the distribution, the greater the degree of confidence you can have in your estimate of the proportion of persons with low- and moderate-incomes. For example, if among your low- and moderate-income group, 10 percent have one person, 40 percent have two persons, and 50 percent have three persons, and among your above low- and moderate-income group 12 percent have one person, 41 percent have two persons, and 47 percent have three persons, you would have a great deal of confidence in your estimate.

Consider another scenario where you estimate that 51 percent of the residents have low- and moderate-incomes. You examine the distribution of household sizes according to Table B and find that in your sample 100 percent of the LMI group had just one person and 100 percent of the non-LMI group had nine or more persons. (Yes, this would be a strange neighborhood.) This distribution would make it probable that your sample was erroneously distributed in favor of large non-LMI families. Without

sampling error, the true distribution in the target area might show that more than 51 percent of the residents have low- and moderate-incomes.

Third, after completing data collection, non-respondents should be briefly analyzed to determine that they were reasonably random. For example, you may want to tabulate the rate of response by street or block in the target area to see whether there are notable gaps in the coverage of your survey. You may want to examine the racial or ethnic background of your respondents and compare them with what you supposed the distribution to be. If you do not detect any major gaps in the coverage of your sample or any probable patterns in the characteristics of your non-respondents, you can be more certain of the accuracy of your estimates.

## **STEP 5: DOCUMENTING YOUR EFFORT**

The results of your survey will indicate to you with a high degree of accuracy whether or not your target area is predominantly low- and moderate-income. People, who may be auditing or evaluating the program, may want to review the procedures and data you used to determine that your target area qualifies under the CDBG program regulations. You should therefore maintain careful documentation of the survey. Suggestions for handling the contents of that documentation are discussed here:

- a. Keep the completed surveys. This will show you actually did the surveys and asked the proper questions.
- b. Keep a list of the universe of households you sampled from and a list of the actual households sampled. This might be one list with the sampled households being checked once if they are sampled, and checked twice if they are interviewed. Replacement households should be noted too. There should be some written documentation about the method you used to select households from the list for interviewing.

If you did a door-to-door sample without starting from a universe list, you should have written down the procedures you used to select the sample, including instructions to interviewers for replacing sampled households who were not interviewed.

- c. To the extent possible, you should retain all of the data collected. If you put the data into a computer, keep a copy of the data and programs you used to tabulate the results. If you draw your tabulations from spreadsheets, retain the spreadsheets. If you just leaf through the questionnaires and count up responses and enter them into a table as you go, keep the tables with the raw data counts and worksheets.

## APPENDIX A A RANDOM NUMBERS TABLE

This appendix contains a three-page table of random numbers. It is just that -- each number on the sheet is random. You can use it going up, down, sideways, diagonally, and you can use any column or combination of columns in drawing your random numbers. The following are some examples of how the enclosed table can be used.

### Example 1: Drawing a Sample of 5 of 100.

Start this time with the "58" in the lower left hand corner of the table. Let's work across the bottom row from here, and take the numbers "58", "61", "21", "72", and "34". From the list of 100 households, our sample would include the 51st, 61st, 21st, 72nd, and 34th households on the list.

### Example 2: Drawing a Sample of 5 of 30.

Start this time back in the upper left hand corner and start with the "39" and work across. The numbers in order are "39", "4", "45", "30", "16", "79", "46", "99", and "17". Notice that all of these numbers except for the 4 and 16 are greater than 30. Just skip them until you find a number in your range. Here you would sample the 4th and 16th household on your list and continue until you found three more (which would be the 21st, the 16th, and the 22nd).

Random Numbers

1	90	92	35	87	33	7	29	78	17	10	87	67	32	90	10	79	67	65	5	1	94
2	27	8	5	80	46	97	39	68	24	69	14	10	11	71	69	34	3	68	46	16	86
3	7	9	15	95	94	47	99	98	54	85	65	99	83	82	36	81	41	55	59	54	60
4	26	42	28	100	14	65	95	60	74	14	91	77	2	21	27	41	72	94	55	44	62
5	78	43	73	31	81	59	81	25	10	43	91	83	85	79	52	26	31	74	3	83	1
6	8	17	26	71	46	92	71	68	49	22	87	88	96	60	56	9	23	69	88	51	65
7	37	23	60	94	40	82	81	64	57	76	58	54	95	97	27	39	88	98	26	100	78
8	83	90	34	31	40	15	66	69	17	3	5	4	76	63	65	83	82	37	88	51	44
9	66	21	7	43	34	40	37	23	14	40	82	5	83	16	90	0	99	74	27	88	85
10	45	50	33	59	4	23	43	60	63	14	56	22	10	97	94	6	69	6	84	46	69
11	41	50	10	56	74	7	97	9	52	97	61	67	44	66	23	24	65	66	23	77	53
12	53	23	47	99	53	54	16	2	37	26	68	29	21	36	51	96	11	61	23	26	16
13	14	3	28	50	57	90	22	13	9	25	34	20	10	71	78	80	6	43	57	18	91
14	29	56	31	8	88	80	18	46	4	52	66	80	93	30	7	55	48	32	2	49	72
15	47	57	39	62	43	26	79	98	85	72	5	2	57	84	77	50	11	46	20	36	82
16	35	64	60	14	5	57	41	84	43	17	23	9	51	70	24	90	55	59	74	28	36
17	49	12	97	75	78	46	58	71	80	77	1	82	16	60	45	28	29	13	44	63	44
18	83	38	45	78	62	14	44	20	25	35	50	22	74	93	28	78	60	83	57	63	84
19	44	90	89	27	92	86	99	70	45	97	32	54	97	70	11	100	1	24	89	8	14
20	50	48	48	24	9	67	19	0	53	26	15	59	24	75	28	34	81	96	14	68	12
21	64	61	4	63	17	90	40	97	41	65	75	16	81	39	58	87	61	53	6	22	93
22	83	79	32	44	39	62	34	38	84	94	92	4	2	38	48	74	53	21	34	82	88
23	41	27	77	73	28	5	98	96	15	43	58	24	70	36	18	9	84	39	65	14	52
24	5	87	93	8	63	43	63	11	99	99	29	82	42	39	83	84	14	24	13	29	76
25	63	100	84	18	81	68	20	60	56	81	81	70	4	66	91	26	89	30	83	97	99
26	99	88	71	33	13	92	21	42	7	61	52	78	47	65	79	38	69	37	38	26	35
27	3	43	95	22	74	25	25	37	41	75	2	17	8	63	7	14	50	95	63	67	34
28	9	11	62	98	3	83	51	1	47	22	57	76	23	63	88	49	41	36	97	77	64
29	37	95	50	55	66	53	51	82	2	29	25	72	93	29	7	29	78	14	16	11	76
30	9	57	76	83	76	14	44	9	74	40	2	32	85	45	91	86	68	89	24	54	87
31	21	75	31	61	35	23	86	36	20	12	26	92	21	88	5	5	97	40	9	47	88
32	56	54	43	93	15	53	74	2	91	3	91	54	82	69	22	2	18	24	8	45	41
33	29	11	38	87	29	23	3	5	58	79	83	67	78	22	85	8	60	10	84	45	4
34	16	16	96	65	14	41	1	93	73	50	77	25	7	76	13	18	86	59	1	88	39
35	66	80	46	64	59	5	12	19	48	60	95	5	6	98	31	50	86	75	99	39	7
36	41	100	88	54	18	73	38	54	82	20	62	83	22	50	25	60	23	8	41	44	22
37	50	64	48	23	90	83	21	66	98	55	10	75	91	22	99	33	80	22	49	57	51
38	45	3	51	0	70	19	51	48	8	51	36	30	29	26	39	66	59	21	67	52	49
39	70	82	76	30	38	57	17	75	76	52	62	87	36	51	3	14	54	56	22	65	100
40	14	33	16	30	39	60	71	5	39	15	70	82	27	55	33	71	99	11	82	75	21
41	41	82	54	19	29	89	11	79	96	16	66	55	55	82	77	44	50	92	93	98	23
42	92	39	73	83	46	15	72	82	64	23	87	55	23	90	80	68	98	14	65	26	91
43	89	54	76	17	82	61	14	90	47	43	1	70	65	57	31	54	60	48	57	9	20
44	100	97	32	74	2	78	49	58	80	77	5	1	99	9	75	44	83	56	53	26	73
45	25	78	4	85	68	15	36	50	9	49	41	81	67	39	56	8	13	72	8	1	49
46	85	77	31	77	47	33	95	47	29	29	86	64	85	93	41	1	57	68	55	96	96
47	4	33	68	47	5	65	71	14	87	42	73	61	55	2	15	22	33	96	71	73	69
48	49	54	76	24	33	36	68	48	15	55	15	1	78	53	77	20	75	20	71	72	43
49	76	40	36	30	31	75	31	2	60	52	66	37	41	41	75	23	52	10	63	21	36
50	4	54	28	84	90	80	18	97	75	49	56	51	33	80	54	96	43	55	19	78	12
51	64	79	72	50	46	31	13	8	67	26	18	15	87	64	90	71	23	16	79	28	6
52	23	3	83	93	12	39	42	24	1	30	51	75	32	27	41	5	93	19	10	79	22
53	65	72	48	93	65	29	55	2	99	31	13	41	26	32	68	65	94	13	49	67	34

## RANDOM NUMBERS AND STATISTICS

98	54	21	100	38	47	88	88	56	27	15	20	58	45	13	2	32	23	97	86	96	46	32	53
54	33	46	99	50	28	67	22	61	53	20	39	26	38	57	50	50	50	15	89	88	44	7	10
73	47	50	38	4	47	31	7	22	9	56	34	71	28	72	79	78	14	99	83	97	45	65	20
92	3	56	60	60	46	84	20	75	75	40	21	3	7	85	20	1	49	69	82	95	35	85	11
78	23	76	54	58	76	11	54	13	6	9	99	65	62	15	69	57	24	26	91	67	58	27	44
63	45	68	15	91	10	52	81	27	27	39	34	30	3	12	23	98	22	56	60	87	64	84	30
58	55	43	32	46	8	25	88	22	27	31	60	13	46	85	52	31	52	80	26	78	19	2	33
48	8	23	62	34	5	25	35	79	74	22	87	12	68	100	11	53	85	39	30	75	28	9	49
61	43	24	64	89	39	82	51	36	45	88	24	4	23	93	42	3	15	29	49	78	72	16	59
27	91	70	78	3	86	100	99	59	93	58	54	55	41	84	39	90	69	5	58	1	63	45	31
49	87	70	65	43	42	6	61	82	5	28	22	95	49	79	48	4	13	77	37	40	75	57	82
42	83	27	13	89	44	77	14	32	21	1	12	67	46	3	38	80	37	61	91	90	71	37	50
22	91	48	90	84	44	67	90	16	12	3	38	95	95	24	29	50	93	40	72	4	6	73	38
65	41	29	74	61	20	12	56	37	57	90	25	7	82	78	28	35	29	71	76	97	66	3	88
34	68	84	83	92	83	89	58	47	22	0	79	4	55	37	86	53	1	5	33	7	96	52	75
28	82	88	51	26	59	51	46	75	31	86	63	64	45	59	7	53	2	85	70	40	88	34	61
86	88	24	85	23	50	55	8	3	64	6	61	2	29	76	28	84	92	6	82	85	7	45	42
54	47	91	5	33	11	43	83	80	93	94	61	7	22	33	0	92	73	3	57	32	69	84	59
8	58	83	69	62	91	88	5	49	95	43	99	55	24	73	16	31	7	3	57	98	61	19	57
69	69	49	91	67	93	68	42	20	26	100	84	49	67	93	37	87	8	86	19	24	44	21	46
96	87	92	43	57	32	83	63	12	44	47	97	29	74	39	37	20	59	10	16	10	48	35	27
45	51	28	16	80	7	16	12	51	19	24	11	67	6	4	71	47	22	91	66	39	91	85	19
43	72	52	11	61	34	16	24	27	27	57	70	94	53	24	19	46	84	83	24	27	69	11	44
89	42	57	98	15	55	30	91	32	78	32	77	69	23	78	16	20	87	47	39	69	66	87	25
96	88	82	16	87	72	69	98	98	98	52	63	32	76	79	44	60	93	1	45	94	44	91	72
53	95	42	41	56	79	15	98	14	60	61	58	55	68	46	92	72	89	18	12	93	37	7	47
69	50	86	54	88	32	3	23	99	59	54	86	97	26	1	36	67	16	89	63	75	64	59	43
9	67	51	61	46	4	37	78	35	28	16	14	6	92	57	64	47	0	73	14	5	51	84	35
67	6	9	11	69	28	9	12	2	7	99	76	88	37	4	97	40	81	46	11	4	75	54	65
5	22	23	81	41	54	26	64	12	89	28	68	19	66	7	72	62	82	97	7	71	73	27	71
86	60	7	6	64	35	51	19	28	38	67	33	37	73	83	4	49	76	19	53	31	40	6	43
18	100	54	36	47	85	32	79	13	53	27	11	84	57	28	37	3	8	44	69	89	72	42	4
14	21	84	23	9	20	33	49	64	46	24	23	31	35	54	87	32	73	11	46	91	4	42	73
22	69	85	63	38	93	31	86	68	57	70	24	60	18	41	55	22	27	47	13	82	12	98	85
19	57	23	45	69	56	67	25	2	69	54	40	40	7	56	68	14	49	11	56	67	62	12	88
75	39	94	82	91	50	67	63	72	6	47	87	60	69	95	39	63	9	11	50	37	51	53	57
63	76	16	4	74	83	39	65	10	87	48	6	56	81	32	11	22	9	17	10	95	32	72	19
39	25	84	74	15	87	24	56	48	16	10	29	69	50	92	79	95	97	11	73	48	79	97	45
46	20	59	85	77	53	93	23	84	15	54	25	41	89	99	26	61	66	43	58	47	90	56	42
78	78	6	76	66	6	36	64	89	17	12	78	80	42	47	24	77	74	36	60	91	86	25	86
62	9	3	0	62	29	73	40	87	51	43	2	34	89	45	69	95	2	76	52	78	8	58	37
80	17	28	5	89	14	27	73	47	68	37	48	23	7	97	66	36	34	19	60	99	8	72	2
67	16	58	72	99	15	89	89	73	19	25	10	83	60	68	3	6	93	9	87	57	57	81	41
73	73	10	82	45	22	39	77	45	31	37	82	60	80	77	58	100	69	32	6	26	73	99	81
16	53	4	68	50	9	11	69	97	84	5	6	84	92	14	29	59	93	75	19	97	86	81	39
75	77	38	8	40	25	20	44	67	3	14	98	18	65	41	83	61	23	57	67	79	36	65	13
34	42	45	42	33	58	53	79	89	99	35	19	29	80	11	11	56	54	77	95	10	63	7	1
53	9	66	99	17	74	79	85	84	45	47	95	89	41	66	99	58	12	1	18	24	19	50	67
89	96	6	10	59	79	60	72	90	58	97	57	54	28	10	15	38	5	33	55	68	95	12	46
23	38	59	62	90	33	46	7	79	13	53	66	77	18	48	87	15	16	27	10	39	15	34	95
62	59	13	18	54	57	47	34	55	6	50	51	12	39	89	37	26	41	44	21	23	98	52	88
9	19	8	38	33	97	46	98	89	15	52	4	92	31	80	89	48	90	73	44	96	7	38	16