

TEAL: Frequency Tables for Teal Scan Forms

(for surveys with up to 150 responses)

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Overview

The TEAL program processes the teal "General Response Forms" used for surveys having 150 or fewer items with responses ranging from 0–9. The program produces a frequency table listing the mean response and standard deviation for each item, based on the number of actual responses to that item. You can request a printed listing or a computer file with the actual responses on each form. The program can analyze a single set of forms or multiple sets analyzed independently.

Layout of the forms

Each teal scan form is divided into three fields: the *A* field (alphabetic), the *B* field (numeric), and the *Response* field of up to 150 items. Each set of Response Forms is preceded by a specially marked teal form called a Processing Control Form or Separator Form. The Response Form, Processing Control Form and Separator Form are all the same printed teal form, available from Central Stores (stock number UD 9080815). They differ only in how you mark them.

All forms must be filled in using a #2 pencil. The scanner can read only one mark per response line. The TEAL program will record a blank for a line with multiple marks. Response lines that are not filled in will also be recorded as blank.

Response Form

A respondent marks his or her responses in the *Response* field. He or she can also add labeling or identifying information in the *A* and *B* fields. You can select processing options that take information respondents mark in the various fields and transfer it to printed and computer file output.

Processing Control Form

On the Processing Control Form, the *B* field is used to specify processing options (e.g., frequency tables, computer file output). The *A* field is used to specify optional labeling information for printed and file output. When multiple sets of Response Forms are analyzed in the same computer run, the first set must be preceded by a *Processing Control Form* and sets must be separated by a *Separator* form (described below). The *Response* field is not used on control and separator forms.

If you want to request a computer file containing the data from your survey

The first scan form must be a teal Processing Control Form. Two options on the form allow you to create a computer file with the contents of the actual Response Forms. These options produce a narrow-format (80 columns/line) or a wide-format (168 columns/line) computer file. If you have several sets of Response Forms in a single run, their contents will all be copied into one computer file. If you want to name the computer file, you must specify the file name on the Processing Control Form.

Narrow-format file (80 columns)

You can select which of the *A* and *B* fields and how many of the 150 items in the *Response* field to have transferred to the computer file. Blanks and marks 0–9 in the *Response* field are usually transferred without change to the narrow-format computer file. However, you can request that a blank be recoded as 0 and marks 0–9 be recoded as 1–10 before being written to the computer file.

The number of requested response items may exceed the capacity of a line (also called a record) in the computer file. In that case, a second, or possibly third, record is written for each respondent. The layout of the records is determined by your choice of which fields to transfer, how many items there are, and whether recoding is to be done. The specifics are given in Appendix A: *Layout of the narrow-format file*. The narrow-format file is always named "tealr80.data.bin#". The *bin#* part of the file name is assigned by the I/O staff.

Wide-format file (168 columns)

The *A* and *B* fields and all 150 items in the *Response* field are transferred to one line (also called a record) of the computer file. This file is more difficult to edit and to print than the narrow-format file. However, it is simpler to use as input to statistical packages. This is because each column on every line of the file corresponds to the same information. For example, column 19 is always the response to item 1. The specifics are given in Appendix B: *Layout of the wide-format file*. In contrast to the narrow-format file, you may specify a unique name for the wide-format computer file by marking columns 1-3 of the *A* field, as described below.

How to mark a Processing Control Form

In the box labeled "B" on the Processing Control Form, specify the processing options for your surveys. Below are the processing options and the results they will produce.

Column 1-3: Maximum item number

Mark the highest item number used on the Response Forms, from 1 to 150. If the number is a single digit such as 7, mark it as 007; if it is a double digit such as 54, mark it as 054.

Column 4: Request Frequency table

Mark 0 or leave blank if you do not want a frequency table.

Mark 1 to request a printed table. You can request an optional label for the table in *Column 8*.

Column 5: Request a Narrow-format computer file

Mark 0 or leave blank if you do not want this computer file.

Mark 1-6 to request this file. The contents of the file depend upon the option you choose. Consult the table below for the results you will receive for each option.

Mark option 5 rather than 6 if no respondents chose a 9 in their *Response* field.

Mark	A Field	B Field	Response Field
1	No	No	Yes: no recoding done
2	No	Yes	Yes: no recoding done
3	Yes	No	Yes: no recoding done
4	Yes	Yes	Yes: no recoding done
5	No	No	Yes: Blanks recoded as 0; 0 recoded as 1; 1 recoded as 2; ...; 8 recoded as 9
6	No	No	Yes: Blanks recoded as 0; 0 recoded as 1; 1 recoded as 2; ...; 9 recoded as 10

Appendix A shows you how to interpret the contents of the file. The Narrow-format file is always named "tealr80.data.bin#". The *bin#* part of the file name is assigned by the I/O staff.

Column 6: Print contents of Response Forms

Mark 0 or leave blank if you do not want a printed listing of the forms.

Mark 1 to request a printed listing. Each respondent's *A* and *B* field information is printed on one line. This is followed by the *Response* field information, with up to 100 items printed per line.

Column 7: Request a wide-format computer file

Mark 0 or leave blank if you do not want to create this computer file.

Mark 1 to generate a file with one line (also called a record) per respondent, consisting of the entire *A*, *B*, and *Response* fields.

The file will be named "tealxxx.data.bin#". In the file name, *xxx* is replaced with the 3 letters you enter into the "A" field, columns 1-3. The *bin#* part of the file name is assigned by the I/O staff. If you leave columns 1-3 blank, the file will be named "tealAAA.data.bin#".

Appendix B shows you how to interpret the contents of this file.

Column 8: Request a Frequency table label

Mark 0 or leave blank if you do not want to label the frequency table.

Mark 1 to request that frequency tables be labeled with the information marked in the *A* and *B* fields for the first Response Form in each set of Response Forms.

Column 9: Not currently used.

How to mark a Separator Form

To submit more than one set of Response Forms in a single run, place a teal scan form between sets of Response Forms. Mark 9999 in columns 1–4 of the *B* field. This form acts as a *Separator* form between sets, but is not analyzed as a Response Form.

Preparing the Scan Job for submission

Stack all forms face up with the same orientation.

Fully erase stray marks.

Do not attach paper clips or staples.

Do not fold the forms.

At the top right corner of the Control Form, write the word CONTROL next to the printed word *Identification* to identify the Processing Control Form.

Order of Scan Forms

To submit a single set of Response Forms, arrange the forms in the following order:

First Processing Control Form
First set of Response Forms

To submit multiple sets of Response Forms, arrange the forms in the following order:

First Processing Control Form
First set of Response Forms
Separator Form
Second set of Response Forms
Separator Form
etc.

Submitting the scan job for processing

1. Obtain a **Frequency Scan Request Card** at the I/O Counter in 004 Smith Hall. Fill in your UNIX username or user number and the other requested information. Submit this card with your forms. The I/O clerk will give you a "bin slip" containing a unique number to identify your job.
2. After the job is processed, your forms and printed results will be returned to the I/O counter. If you selected options on the Processing Control Form that created a computer file, the file(s) are placed in your home directory on your UNIX account.

Appendix A: Layout of the narrow-format computer file

The layout of the narrow-format computer file depends upon the option you marked in column 5 of the Processing Control Form's B field. Each line of the file is 80 columns wide; the file contains as many lines as necessary to display all the information in the Response field for each respondent (i.e., there may be two or three lines, each 80 columns wide, for each respondent). Each line of the file contains a sequence number in column 80 indicating how many lines correspond to an individual Response Form. For example, if each form produces three lines in the file, column 80 would be numbered 1, 2, and 3 for the first form, 1, 2, and 3 for the second form and so on.

The following chart shows what information appears in each column of the computer file you receive. The contents of the file change according to the option you selected in column 5.

Processing Control Form's "B" field, column 5, option 1

<i>Computer file columns</i>	<i>Information (from Response Form)</i>
1-72	Response field values (up to 72 single-digit values per line)
73-75	A field: columns 1-3
76-79	B field: columns 1-4
80	Sequence number

Processing Control Form's "B" field, column 5, option 2

<i>Computer file columns</i>	<i>Information (from Response Form)</i>
1-9	B field: columns 1-9
10-72	Response field values (up to 63 single-digit values per line)
73-75	A field: columns 1-3
76-79	B field: columns 1-4
80	Sequence number

Processing Control Form's "B" field, column 5, option 3

<i>Computer file columns</i>	<i>Information (from Response Form)</i>
1-9	A field: columns 1-9
10-72	Response field values (up to 63 single-digit values per line)
73-75	A field: columns 1-3
76-79	B field: columns 1-4
80	Sequence number

Processing Control Form's "B" field, column 5, option 4

<i>Computer file columns</i>	<i>Information (from Response Form)</i>
1-9	A field: columns 1-9
10-18	B field: columns 1-9
19-72	Response field values (up to 54 single-digit values per line)
73-75	A field: columns 1-3
76-79	B field: columns 1-4
80	Sequence number

Processing Control Form's "B" field, column 5, option 5

<i>Computer file columns</i>	<i>Information (from Response Form)</i>
1-72	Recoded response field values (up to 72 single-digit values per line)
73-75	A field: columns 1-3
76-79	B field: columns 1-4
80	Sequence number

Processing Control Form's "B" field, column 5, option 6

<i>Computer file columns</i>	<i>Information (from Response Form)</i>
1-72	Recoded response field values (up to 36 double-digit values per line)
73-75	A field: columns 1-3
76-79	B field: columns 1-4
80	Sequence number

Appendix B: Layout of the wide-format computer file

If you marked 1 in column 7 of the Processing Control Form's "B" field, a wide-format computer file will be placed in your UNIX account. Each line of the file is 168 columns wide and contains the information from one response sheet. The file is called tealAAA.data.bin# or tealnnn.data.bin# (if you marked columns 1-3 of the "A" field with letters to give the file a unique name).

The following chart shows what information appears in each column of the computer file you receive.

Processing Control Form's "B" field, column 7, option 1

<i>Computer file columns</i>	<i>Information (from Response Form)</i>
1-9	A field
10-18	B field
18-168	Response field

Appendix C: Sample Processing Control Form, Response Form, and results

Attached to this document are a sample Processing Control Form and a Response Form followed by the results you would receive if you chose the options indicated on the Processing Control Form.

On the sample Processing Control Form, the instructor indicated that the maximum number of responses was 22. That person also requested:

- a frequency table (shown on page 3 of the sample results pages)
- a narrow-format computer file (shown on page 1 of the sample results pages as "Punch Request") containing the information from the A and Response fields. The file will be sent to her UNIX account.
- a printed copy of each respondent's answers (shown on page 2 of the sample results pages).
- a label for the frequency table with the information from the A and B fields of the first response form. (The label—ENGLISH 11025, in this case—is shown on page 3 of the results pages.)

The Response Form matches the the third set of responses shown on page 2 of the sample results pages. Notice that for item 4, the respondent has marked two answers and for item 15, the respondent has chosen no answer. In both cases, the Teal program ignores the responses (note the missing values for the third set of responses on page 2).

For help with filling out scan forms or submitting them, contact the Help Desk through e-mail at consult@strauss.udel.edu or call 831-6000.

Control Sheet

Identification

Erase completely
Fill in bubble completely
Use No. 2 pencil

Do not mark in border area

Table A: 9 rows (A-I) x 26 columns (1-26) containing letters A-Z for identification.

Table B: 9 rows (1-9) x 10 columns (1-10) containing numbers 0-9 for identification.

Form A: 26 rows (101-150) x 10 columns (1-10) for data entry.

Form C: 26 rows (51-100) x 10 columns (1-10) for data entry.

Form D: 26 rows (1-50) x 10 columns (1-10) for data entry.

DO NOT MARK IN THIS AREA

DO NOT MARK IN THIS AREA



GENERAL RESPONSE FORM

Erase completely
Do not mark in border area

Fill in bubble
Use No. 2 pencil

completely

Identification

Henry James

A	1	2	3	4	5	6	7	8	9
	E	N	G	L	I	S	H		
	A	B	C	D	E	F	G	H	I
	J	K	L	M	N	O	P	Q	R
	S	T	U	V	W	X	Y	Z	

B	1	2	3	4	5	6	7	8	9
	1	0	2	5					
	0	1	2	3	4	5	6	7	8
	9	0	1	2	3	4	5	6	7
	8	9	0	1	2	3	4	5	6

50	0	1	2	3	4	5	6	7	8	9
49	0	1	2	3	4	5	6	7	8	9
48	0	1	2	3	4	5	6	7	8	9
47	0	1	2	3	4	5	6	7	8	9
46	0	1	2	3	4	5	6	7	8	9
45	0	1	2	3	4	5	6	7	8	9
44	0	1	2	3	4	5	6	7	8	9
43	0	1	2	3	4	5	6	7	8	9
42	0	1	2	3	4	5	6	7	8	9
41	0	1	2	3	4	5	6	7	8	9
40	0	1	2	3	4	5	6	7	8	9
39	0	1	2	3	4	5	6	7	8	9
38	0	1	2	3	4	5	6	7	8	9
37	0	1	2	3	4	5	6	7	8	9
36	0	1	2	3	4	5	6	7	8	9
35	0	1	2	3	4	5	6	7	8	9
34	0	1	2	3	4	5	6	7	8	9
33	0	1	2	3	4	5	6	7	8	9
32	0	1	2	3	4	5	6	7	8	9
31	0	1	2	3	4	5	6	7	8	9
30	0	1	2	3	4	5	6	7	8	9
29	0	1	2	3	4	5	6	7	8	9
28	0	1	2	3	4	5	6	7	8	9
27	0	1	2	3	4	5	6	7	8	9
26	0	1	2	3	4	5	6	7	8	9
25	0	1	2	3	4	5	6	7	8	9
24	0	1	2	3	4	5	6	7	8	9
23	0	1	2	3	4	5	6	7	8	9
22	0	1	2	3	4	5	6	7	8	9
21	0	1	2	3	4	5	6	7	8	9
20	0	1	2	3	4	5	6	7	8	9
19	0	1	2	3	4	5	6	7	8	9
18	0	1	2	3	4	5	6	7	8	9
17	0	1	2	3	4	5	6	7	8	9
16	0	1	2	3	4	5	6	7	8	9
15	0	1	2	3	4	5	6	7	8	9
14	0	1	2	3	4	5	6	7	8	9
13	0	1	2	3	4	5	6	7	8	9
12	0	1	2	3	4	5	6	7	8	9
11	0	1	2	3	4	5	6	7	8	9
10	0	1	2	3	4	5	6	7	8	9
9	0	1	2	3	4	5	6	7	8	9
8	0	1	2	3	4	5	6	7	8	9
7	0	1	2	3	4	5	6	7	8	9
6	0	1	2	3	4	5	6	7	8	9
5	0	1	2	3	4	5	6	7	8	9
4	0	1	2	3	4	5	6	7	8	9
3	0	1	2	3	4	5	6	7	8	9
2	0	1	2	3	4	5	6	7	8	9
1	0	1	2	3	4	5	6	7	8	9

Mark Reflex by NCS EP-1070-021 A2803

DO NOT MARK IN THIS AREA

DO NOT MARK IN THIS AREA



Printed in U.S.A.

Program to process TEAL ten-response form

Control Information entered:

- 22 Maximum item number used
- 1 Frequency count request (0=NO, 1=YES)
- 3 Punch request (0=no, 1-6=yes)
- 1 Form print request (0=no, 1=yes)
- 0 Save diskpack file request (0=no, 1=yes)
- 1 Print label information (0=no, 1=yes)

Number of scan forms processed (Rejects not included) 11

Print request output...

ENGLISH 11025
7446516334616342361006

ENGLISH
34436750133214311105 4

ENGLISH 11025
554 1352215134 1443131

ENGLISH
426227720100113 526191

ENGLISH 11025
0123450123414503302423

ENGLISH
5690892253571106887852

ENGLISH 11025
5908193425126638710557

ENGLISH
5691036922154748911581

ENGLISH
0692740165475503777249

ENGLISH
2256166867660164369960

Total forms in set: 10

ENGLISH 11025

Item	Responses										Total Responses	Mean/Standard Deviation	
	0	1	2	3	4	5	6	7	8	9			
1	2	0	1	1	1	4	0	1	0	0	10	3.600/	2.319
(%)	20.00	0.00	10.00	10.00	10.00	40.00	0.00	10.00	0.00	0.00			
2	0	1	2	0	2	1	3	0	0	1	10	4.500/	2.415
(%)	0.00	10.00	20.00	0.00	20.00	10.00	30.00	0.00	0.00	10.00			
3	1	0	1	0	3	1	1	0	0	3	10	5.200/	3.084
(%)	10.00	0.00	10.00	0.00	30.00	10.00	10.00	0.00	0.00	30.00			
4	1	1	2	2	0	0	2	0	1	0	9	3.444/	2.651
(%)	11.11	11.11	22.22	22.22	0.00	0.00	22.22	0.00	11.11	0.00			
5	1	3	1	0	1	1	1	1	1	0	10	3.500/	2.877
(%)	10.00	30.00	10.00	0.00	10.00	10.00	10.00	10.00	10.00	0.00			
6	0	1	0	2	1	1	1	2	0	2	10	5.400/	2.675
(%)	0.00	10.00	0.00	20.00	10.00	10.00	10.00	20.00	0.00	20.00			
7	2	0	1	1	0	2	3	1	0	0	10	4.000/	2.582
(%)	20.00	0.00	10.00	10.00	0.00	20.00	30.00	10.00	0.00	0.00			
8	1	2	3	1	1	0	0	0	1	1	10	3.200/	3.011
(%)	10.00	20.00	30.00	10.00	10.00	0.00	0.00	0.00	10.00	10.00			
9	1	1	4	1	0	1	2	0	0	0	10	2.900/	2.079
(%)	10.00	10.00	40.00	10.00	0.00	10.00	20.00	0.00	0.00	0.00			
10	0	2	1	3	1	2	0	1	0	0	10	3.400/	1.897
(%)	0.00	20.00	10.00	30.00	10.00	20.00	0.00	10.00	0.00	0.00			
11	1	2	0	1	2	2	2	0	0	0	10	3.500/	2.173
(%)	10.00	20.00	0.00	10.00	20.00	20.00	20.00	0.00	0.00	0.00			
12	1	3	2	0	0	1	1	2	0	0	10	3.200/	2.741
(%)	10.00	30.00	20.00	0.00	0.00	10.00	10.00	20.00	0.00	0.00			
13	1	3	0	1	2	1	2	0	0	0	10	3.100/	2.234
(%)	10.00	30.00	0.00	10.00	20.00	10.00	20.00	0.00	0.00	0.00			
14	0	3	0	1	2	2	1	1	0	0	10	3.700/	2.163
(%)	0.00	30.00	0.00	10.00	20.00	20.00	10.00	10.00	0.00	0.00			
15	3	0	0	3	2	0	1	0	0	0	9	2.556/	2.1
(%)	33.33	0.00	0.00	33.33	22.22	0.00	11.11	0.00	0.00	0.00			
16	0	2	1	2	1	0	1	0	2	0	9	4.000/	2.739
(%)	0.00	22.22	11.11	22.22	11.11	0.00	11.11	0.00	22.22	0.00			
17	0	1	0	3	1	1	0	2	1	1	10	5.000/	2.625
(%)	0.00	10.00	0.00	30.00	10.00	10.00	0.00	20.00	10.00	10.00			
18	1	3	1	0	1	0	2	1	1	0	10	3.600/	2.951
(%)	10.00	30.00	10.00	0.00	10.00	0.00	20.00	10.00	10.00	0.00			
19	2	2	1	1	0	0	1	2	0	1	10	3.600/	3.340
(%)	20.00	20.00	10.00	10.00	0.00	0.00	10.00	20.00	0.00	10.00			
20	1	2	1	0	1	3	0	0	1	1	10	4.000/	3.018
(%)	10.00	20.00	10.00	0.00	10.00	30.00	0.00	0.00	10.00	10.00			
21	1	0	1	1	1	2	1	0	1	1	9	4.667/	2.828
(%)	11.11	0.00	11.11	11.11	11.11	22.22	11.11	0.00	11.11	11.11			
22	1	3	1	1	1	0	1	1	0	1	10	3.400/	3.026
(%)	10.00	30.00	10.00	10.00	10.00	0.00	10.00	10.00	0.00	10.00			