



Creation of Statistical Resources from Real Datasets

Excel Random Data Generator (ISCUS)

A step-by-step guide is given here. First the Excel generator file is run.

Data Generator Program

Before using this program you must have a source dataset available. The dataset may either be stored in another spreadsheet from which this program will copy it, or you may copy the dataset to the Clipboard *prior* to running the Wizard.

Please read the accompanying Operating Instructions before use.

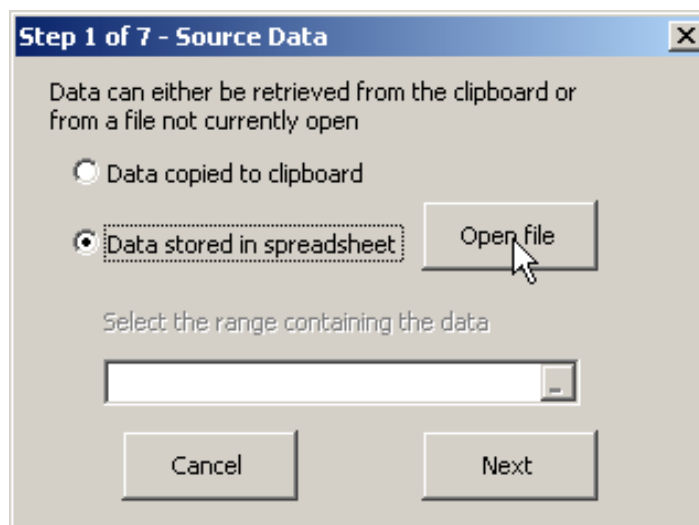
Click here to run the Wizard





Creation of Statistical Resources from Real Datasets

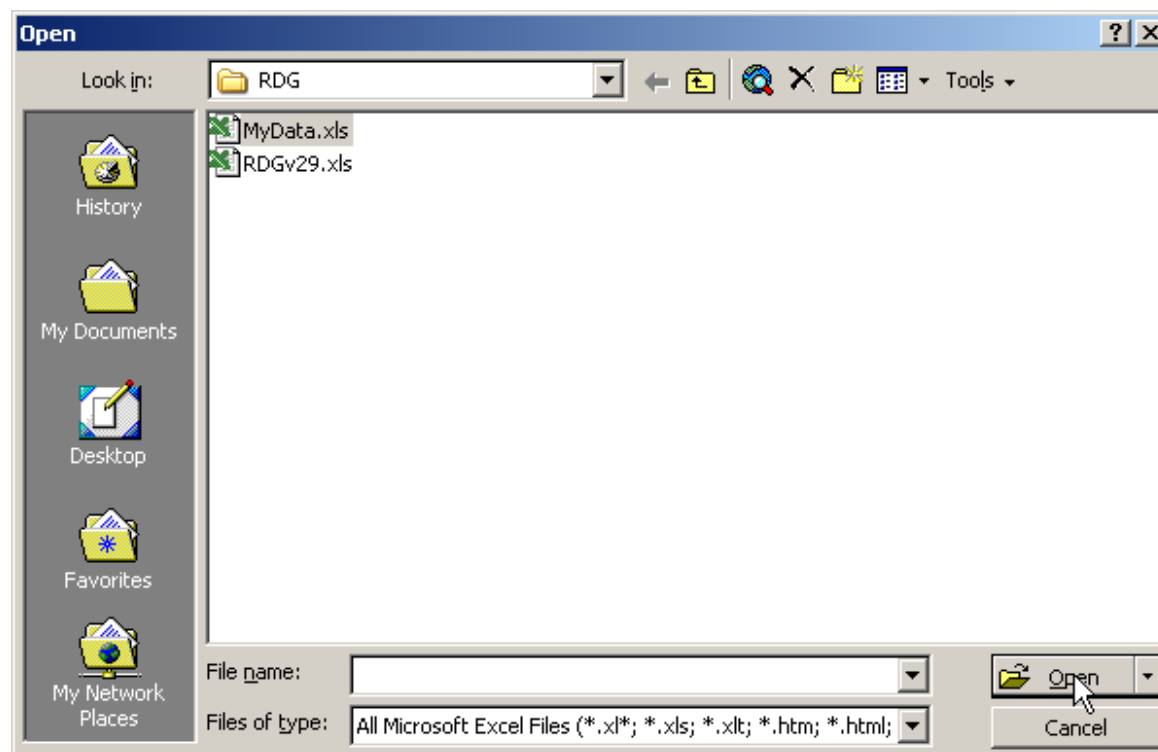
Then the following window appears.





Creation of Statistical Resources from Real Datasets

The following window, showing the data file MyData.xls, then appears.



This is now selected.



Creation of Statistical Resources from Real Datasets

The contents of MyData.xls appear.

The screenshot shows a Microsoft Excel spreadsheet with the following data in the EDUCATION worksheet:

EDUCATI	PREV. DE	GROUP	AGE	EMPLOY	ADDRESS	INCOME	DEBT	
2	Secondary	Yes	4	20	4	0	14	1.358
3	Secondary	No	1	21	4	0	26	2.314
4	Secondary	No	1	21	5	1	25	2.25
5	Secondary	No	1	21	1	1	18	3.114
6	Secondary	No	1	21	1	1	16	1.008
7	Secondary	No	1	22	4	3	14	2.45
8	Secondary	Yes	4	22	4	2	24	3.744
9	Secondary	No	1	22	1	3	17	3.162
10	Secondary	Yes	4	22	4	3	19	4.389
11	Secondary	No	1	22	4	1	16	0.192
12	Secondary	No	1	22	1	0	18	0.792
13	Secondary	Yes	4	23	1	0	21	1.764
14	Secondary	Yes	4	23	2	1	25	1.125
15	Secondary	No	1	23	7	3	22	3.168
16	Secondary	No	1	23	7	2	31	2.046
17	Secondary	No	1	23	1	0	17	0.272
18	Secondary	Yes	4	23	3	0	19	1.596
19	Secondary	Yes	4	23	2	2	16	1.536
20	Secondary	No	1	23	5	2	17	1.343
21	Secondary	Yes	4	24	3	0	14	2.254
22	Secondary	Yes	4	24	8	0	17	0.952
23	Secondary	Yes	4	24	1	0	18	1.062
24	Secondary	Yes	4	24	3	5	15	1.695
25	Secondary	Yes	4	24	3	3	21	6.089
26	Secondary	No	1	24	4	2	21	0.546
27	Secondary	Yes	4	24	0	2	16	2.56
28	Secondary	No	1	24	6	2	21	1.092
29	Secondary	No	1	24	2	1	21	0.126
30	Secondary	No	1	24	2	5	18	1.08
31	Secondary	Yes	4	24	3	4	19	4.636
32	Secondary	No	1	24	7	2	21	1.323
33	Secondary	No	1	24	8	4	24	1.2
34	Secondary	No	1	24	7	0	18	1.17
35	Secondary	No	1	25	5	5	22	2.398
36	Secondary	Yes	4	25	3	2	18	2.934
37	Secondary	No	1	25	8	4	27	3.888
38	Secondary	Yes	4	25	1	6	15	1.71
39	Secondary	No	1	25	9	2	20	0.7
40	Secondary	No	1	25	6	6	22	4.444
41	Secondary	No	1	25	1	1	19	1.311
42	Secondary	Yes	4	25	0	2	18	3.402
43	Secondary	No	1	25	4	0	23	1.196
44	Secondary	No	1	25	9	4	18	0.216
45	Secondary	Yes	4	25	3	2	16	2.848
46	Secondary	No	1	25	8	1	35	1.015
47	Secondary	Yes	4	25	1	0	20	1.34

The dialog box 'Step 1 of 7 - Source Data' is open, showing options for data source and a range selection field.



Creation of Statistical Resources from Real Datasets

The first 40 rows, say, can be selected by dragging the cursor.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	EDUCATION	PREV. DE GROUP	AGE	EMPLOY	ADDRESS	INCOME	DEBT							
2	Secondary	Yes	4	20	4	0	14	1.358						
3	Secondary	No	1	21	4	0	26	2.314						
4	Secondary	No	1	21	5	1	25	2.25						
5	Secondary	No	1	21	1	1	18	3.114						
6	Secondary	No	1	21	1	1	16	1.008						
7	Secondary	No	1	22	4	3	14	2.45						
8	Secondary	Yes	4	22	4	2	24	3.744						
9	Secondary	No	1	22	1	3	17	3.162						
10	Secondary	Yes	4	22	4	3	19	4.389						
11	Secondary	No	1	22	4	1	16	0.192						
12	Secondary	No	1	22	1	0	18	0.792						
13	Secondary	Yes	4	23	1	0	21	1.764						
14	Secondary	Yes	4	23	2	1	25	1.125						
15	Secondary	No	1	23	7	3	22	3.168						
16	Secondary	No	1	23	7	2	31	2.046						
17	Secondary	No	1	23	1	0	17	0.272						
18	Secondary	Yes	4	23	3	0	19	1.596						
19	Secondary	Yes	4	23	2	2	16	1.536						
20	Secondary	No	1	23	5	2	17	1.343						
21	Secondary	Yes	4	24	3	0	14	2.254						
22	Secondary	Yes	4	24	8	0	17	0.952						
23	Secondary	Yes	4	24	1	0	18	1.062						
24	Secondary	Yes	4	24	3	5	15	1.695						
25	Secondary	Yes	4	24	3	3	21	6.069						
26	Secondary	No	1	24	4	2	21	0.546						
27	Secondary	Yes	4	24	0	2	16	2.56						
28	Secondary	No	1	24	6	2	21	1.092						
29	Secondary	No	1	24	2	1	21	0.126						
30	Secondary	No	1	24	2	5	18	1.08						
31	Secondary	Yes	4	24	3	4	19	4.636						
32	Secondary	No	1	24	7	2	21	1.323						
33	Secondary	No	1	24	8	4	24	1.2						
34	Secondary	No	1	24	7	0	18	1.17						
35	Secondary	No	1	25	5	5	22	2.398						
36	Secondary	Yes	4	25	3	2	18	2.934						
37	Secondary	No	1	25	8	4	27	3.888						
38	Secondary	Yes	4	25	1	6	15	1.71						
39	Secondary	No	1	25	9	2	20	0.7						
40	Secondary	No	1	25	6	6	22	4.444						
41	Secondary	No	1	25	1	1	19	1.311						



Creation of Statistical Resources from Real Datasets

The selected data is shown and we can choose a pin number strategy.

Microsoft Excel - RDGv29.xls

File Edit View Insert Format Tools Data Window Help

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	STRATA	EDUCATION	PREV. DE	GROUP	AGE	EMPLOY	ADDRESS	INCOME	DEBT						
4	1	Secondary (1	Yes		4	20	4	0	14	1.358					
5	1	Secondary (1	No		1	21	4	0	26	2.314					
6	1	Secondary (1	No		1	21	5	1	25	2.25					
7	1	Secondary (1	No		1	21	1	1	18	3.114					
8	1	Secondary (1	No		1	21	1	1	16	1.008					
9	1	Secondary (1	No		1	22	4	3	14	2.45					
10	1	Secondary (1	Yes		4	22	4	2	24	3.744					
11	1	Secondary (1	No		1	22	1	3	17	3.162					
12	1	Secondary (1	Yes		4	22	4	3	19	4.389					
13	1	Secondary (1	No		1	22	4	1	16	0.192					
14	1	Secondary (1	No		1	22	1	0	18	0.792					
15	1	Secondary (1	Yes		4	23	1	0	21	1.764					
16	1	Secondary (1	Yes		4	23	2	1	25	1.125					
17	1	Secondary (1	No		1	23	7	3	22	3.168					
18	1	Secondary (1	No		1	23	7	2	31	2.046					
19	1	Secondary (1	No		1	23	1	0	17	0.272					
20	1	Secondary (1	Yes		4	23	3	0	19	1.596					
21	1	Secondary (1	Yes		4	23	2	2	16	1.536					
22	1	Secondary (1	No		1	23	5	2	17	1.343					
23	1	Secondary (1	Yes		4	24	3	0	14	2.254					
24	1	Secondary (1	Yes		4	24	8	0	17	0.952					
25	1	Secondary (1	Yes		4	24	1	0	18	1.062					
26	1	Secondary (1	Yes		4	24	3	5	15	1.695					
27	1	Secondary (1	Yes		4	24	3	3	21	6.069					
28	1	Secondary (1	No		1	24	4	2	21	0.546					
29	1	Secondary (1	Yes		4	24	0	2	16	2.56					
30	1	Secondary (1	No		1	24	6	2	21	1.092					
31	1	Secondary (1	No		1	24	2	1	21	0.126					
32	1	Secondary (1	No		1	24	2	5	18	1.08					
33	1	Secondary (1	Yes		4	24	3	4	19	4.636					
34	1	Secondary (1	No		1	24	7	2	21	1.323					
35	1	Secondary (1	No		1	24	8	4	24	1.2					
36	1	Secondary (1	No		1	24	7	0	18	1.17					
37	1	Secondary (1	No		1	25	5	5	22	2.398					
38	1	Secondary (1	Yes		4	25	3	2	18	2.934					
39	1	Secondary (1	No		1	25	8	4	27	3.888					
40	1	Secondary (1	Yes		4	25	1	6	15	1.71					
41	1	Secondary (1	No		1	25	9	2	20	0.7					
42	1	Secondary (1	No		1	25	6	6	22	4.444					

Step 2 of 7 - Student PINs

Allow any 5 digit PIN
 Check PIN against list
 List of PINs/Names stored in file:
 Select the range containing the PINs/Names



Creation of Statistical Resources from Real Datasets

The next two windows allow us to choose sample sizes and columns.

Step 3 of 7 - Sample Size

Same sample size for each student

Random sample size for each student

Between

And

Cancel Back Next

Step 4 of 7 - Choice of Columns

Student data is to be drawn from:

all columns

a random selection of columns

a selection of columns as structured below

Structure>>> Selection>>>

Cancel Back Next



Creation of Statistical Resources from Real Datasets

The next two windows allow us to choose rows and mode of operation. The latter can form the basis of assignment questions and solutions.

Step 5 of 7 - Choice of Rows

Stratify using levels in column None

Sample from all levels

Sample from randomly chosen levels equally or proportionately

Use weights

	Level	Weight
<input type="text"/>	<input type="text"/>	<input type="text"/>

Cancel Back **Next**

Step 6 of 7 - Mode of Operation

Student data only

Student data and questions in file:

Key answers for teacher

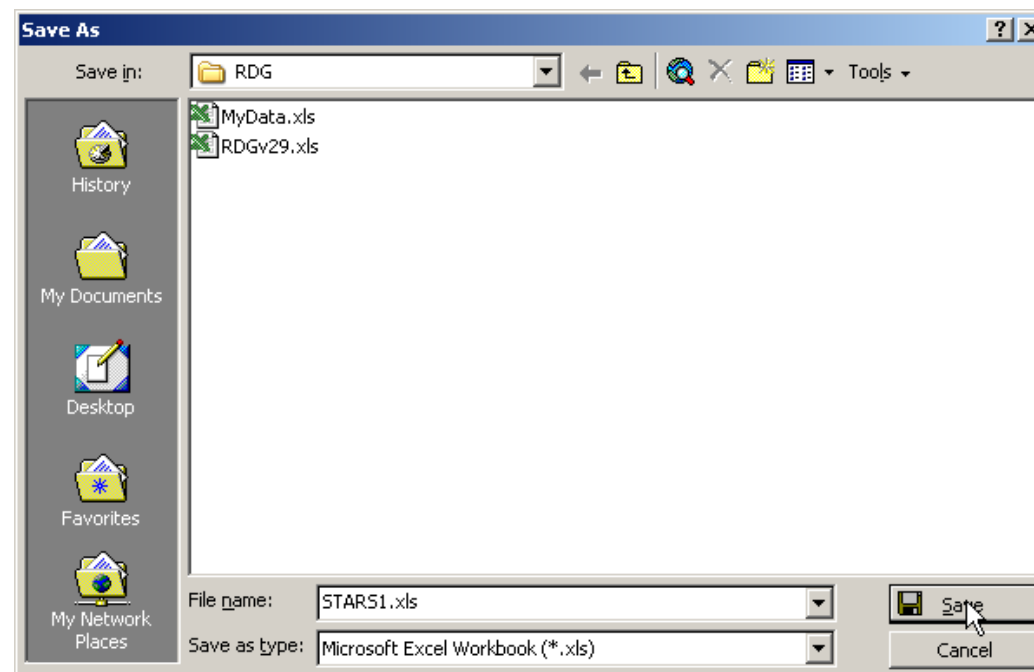
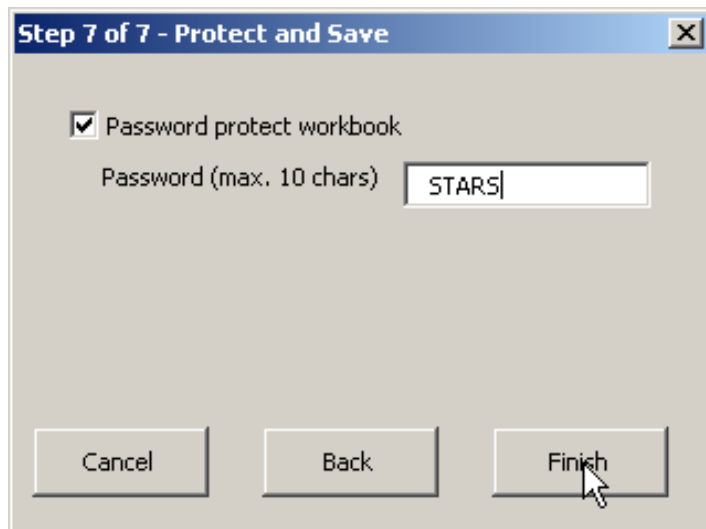
Teacher answers template in file:
 Print for all PINs

Cancel Back **Next**



Creation of Statistical Resources from Real Datasets

The next two windows allow us to protect and save the data subset, as STARS1.xls.





Creation of Statistical Resources from Real Datasets

The next window “invites” us to close Excel, which we do.

The screenshot shows the Microsoft Excel interface with the 'Data Generator Program' dialog box open. The dialog box has a yellow header and contains the following instructions:

1. Please type your five digit PIN number into the blue box and press Return.
PIN (e.g. 05678):
2. Now click on the Create Data button below.

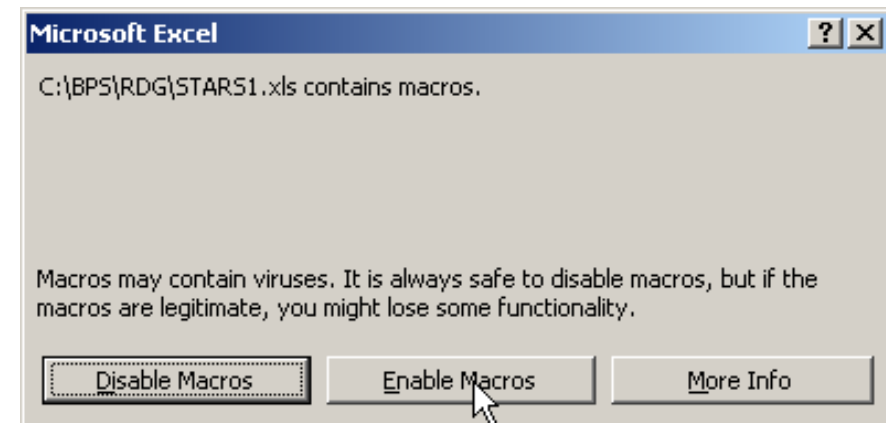
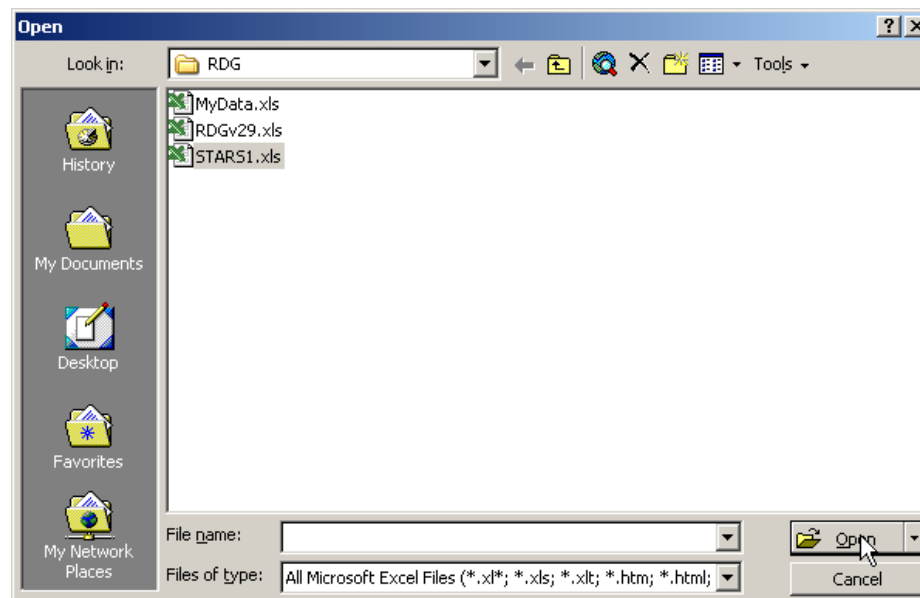
Below the instructions is a 'Create Data' button. At the bottom of the dialog box, it says 'PS. This may take a minute or two'.

In the bottom right corner, a smaller dialog box titled 'Microsoft Excel' is open, displaying the message: 'Wizard Terminated. Excel will now close.' with 'OK' and 'Cancel' buttons. A mouse cursor is pointing at the 'OK' button.



Creation of Statistical Resources from Real Datasets

We now open STARS1.xls and enable macros.





Creation of Statistical Resources from Real Datasets

We now enter a pin number to create a dataset.

Microsoft Excel - STARS1.xls

File Edit View Insert Format Tools Data Window Help

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Data Generator Program

1. Please type your five digit PIN number into the blue box and press Return.
PIN (e.g. 05678):
2. Now click on the Create Data button below.

PS. This may take a minute or two



Creation of Statistical Resources from Real Datasets

The dataset is uniquely determined by the pin number:

Book2																			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	EDUCATIO	PREV. DE	GROUP	AGE	EMPLOY	ADDRESS	INCOME	DEBT		PIN	12345								
2	Secondary	No		1	24		4	24											
3	Secondary	No		1	24		1	21											
4	Secondary	No		1	24		2	5											
5	Secondary	Yes		4	25		1	6											
6	Secondary	No		1	25		8	4											
7	Secondary	No		1	25		5	5											
8	Secondary	No		1	23		7	3											
9	Secondary	Yes		4	24		3	4											
10	Secondary	Yes		4	22		4	2											
11	Secondary	Yes		4	23		1	0											
12	Secondary	No		1	22		1	3											
13	Secondary	No		1	22		4	1											
14	Secondary	Yes		4	23		2	2											
15	Secondary	No		1	23		1	0											
16	Secondary	No		1	24		6	2											
17	Secondary	No		1	22		1	0											
18	Secondary	No		1	21		1	1											
19	Secondary	Yes		4	24		3	5											
20	Secondary	No		1	25		9	2											
21	Secondary	Yes		4	22		4	3											
22	Secondary	Yes		4	23		2	1											
23	Secondary	No		1	21		5	1											
24	Secondary	Yes		4	25		3	2											
25	Secondary	No		1	21		1	1											
26	Secondary	No		1	23		7	2											
27																			
28																			
29																			
30																			
31																			
32																			
33																			

Book3												
	A	B	C	D	E	F	G	H	I	J	K	
1	EDUCATIO	PREV. DE	GROUP	AGE	EMPLOY	ADDRESS	INCOME	DEBT		PIN	11111	
2	Secondary	No		1	22		4	3				
3	Secondary	Yes		4	23		2	1				Records 25
4	Secondary	No		1	25		6	6				Variables 8
5	Secondary	No		1	22		1	3				
6	Secondary	No		1	23		7	2				
7	Secondary	No		1	24		2	5				
8	Secondary	No		1	21		4	0				
9	Secondary	Yes		4	20		4	0				
10	Secondary	No		1	23		5	2				
11	Secondary	No		1	24		7	0				
12	Secondary	No		1	23		1	0				
13	Secondary	No		1	25		9	2				
14	Secondary	Yes		4	23		3	0				
15	Secondary	Yes		4	25		3	2				
16	Secondary	No		1	22		4	1				
17	Secondary	Yes		4	23		1	0				
18	Secondary	No		1	25		5	5				
19	Secondary	No		1	24		2	1				
20	Secondary	No		1	23		7	3				
21	Secondary	No		1	24		6	2				
22	Secondary	Yes		4	24		3	5				
23	Secondary	No		1	24		4	2				
24	Secondary	Yes		4	25		1	6				
25	Secondary	No		1	21		1	1				
26	Secondary	Yes		4	24		3	4				