

R version 4.1.2 (2021-11-01) -- "Bird Hippie"
Copyright (C) 2021 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

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Natural language support but running in an English locale

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[Previously saved workspace restored]

```
> > source("D:\\Dropbox\\Documents\\TAGS.R")  
> TAGS()
```

TAGS V.2.0 is a R program developed by
R. Pouillot and G. Gerbier, Agence Française de Sécurité Sanitaire des Aliments, France.
r.pouillot@afssa.fr

Its purpose is to evaluate diagnostic tests in the absence of a gold standard,
using Maximum Likelihood Estimation (Newton Raphson and Expectation Maximisation
algorithms).

For further details: see
Pouillot R., Gerbier G. (2001)
'Tags' a program for validation of the diagnostic values of tests in the absence of a gold
standard.
Proceedings of the Society for Veterinary Epidemiology and Preventive Medicine,
Noordwijkerhout, The Netherlands, 28th - 30th March 2001: 37-48

Reference(s) population(s) data may be used (population(s) with a known infection status)

Evaluation may be used as soon as $df \geq \text{parameters}$
A goodness-of-fit test and residual correlations are then provided

Three sets of data may be used as examples :

Hui and Walter (Biometrics, 1980, 36:167-171): Enter hui

Saegerman et al (Vet Record, 1999, 145:214-8): Enter sae

Handelman's dentistry data (JADA, 1986, 113:751-754): Enter qu

If you want to enter new data: Enter new

If you want to use loaded data: Enter the name the program has already given to you

data Set ? new

Enter a name for your data : new_8_double

ENTER YOUR data

Number of tests (between 1 and 10) ? 8

Number of population without unknown status (between 1 and 10) ? 2

Do you have Reference Population(s) ?

No : Enter 0

Yes, Disease free : Enter 1

Yes, Infected : Enter 2

Yes, one Disease-free and one Infected : Enter 3

0

population with unknown status 1

Number of results 0 0 0 0 0 0 0 0 in population with unknown status 1 : 254

Number of results 1 0 0 0 0 0 0 0 in population with unknown status 1 : 0

Number of results 0 1 0 0 0 0 0 0 in population with unknown status 1 : 0

Number of results 1 1 0 0 0 0 0 0 in population with unknown status 1 : 0

Number of results 0 0 1 0 0 0 0 0 in population with unknown status 1 : 0

Number of results 1 0 1 0 0 0 0 0 in population with unknown status 1 : 0

Number of results 0 1 1 0 0 0 0 0 in population with unknown status 1 : 0

Number of results 1 1 1 0 0 0 0 0 in population with unknown status 1 : 0

Number of results 0 0 0 1 0 0 0 0 in population with unknown status 1 : 0

Number of results 1 0 0 1 0 0 0 0 in population with unknown status 1 : 0

Number of results 0 1 0 1 0 0 0 0 in population with unknown status 1 : 0

Number of results 1 1 0 1 0 0 0 0 in population with unknown status 1 : 0

Number of results 0 0 1 1 0 0 0 0 in population with unknown status 1 : 0

Number of results 1 0 1 1 0 0 0 0 in population with unknown status 1 : 0

Number of results 0 1 1 1 0 0 0 0 in population with unknown status 1 : 0

Number of results 1 1 1 1 0 0 0 0 in population with unknown status 1 : 0

Number of results 0 0 0 0 1 0 0 0 in population with unknown status 1 : 0

Number of results 1 0 0 0 1 0 0 0 in population with unknown status 1 : 0

Number of results 0 1 0 0 1 0 0 0 in population with unknown status 1 : 0

Number of results 1 1 0 0 1 0 0 0 in population with unknown status 1 : 0

Number of results 0 0 1 0 1 0 0 0 in population with unknown status 1 : 0

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

population with unknown status 2

Number of results	0 0 0 0 0 0 0 0	in population with unknown status 2 : 144
Number of results	1 0 0 0 0 0 0 0	in population with unknown status 2 : 0
Number of results	0 1 0 0 0 0 0 0	in population with unknown status 2 : 0
Number of results	1 1 0 0 0 0 0 0	in population with unknown status 2 : 0
Number of results	0 0 1 0 0 0 0 0	in population with unknown status 2 : 0
Number of results	1 0 1 0 0 0 0 0	in population with unknown status 2 : 0
Number of results	0 1 1 0 0 0 0 0	in population with unknown status 2 : 0
Number of results	1 1 1 0 0 0 0 0	in population with unknown status 2 : 0
Number of results	0 0 0 1 0 0 0 0	in population with unknown status 2 : 0
Number of results	1 0 0 1 0 0 0 0	in population with unknown status 2 : 0
Number of results	0 1 0 1 0 0 0 0	in population with unknown status 2 : 0
Number of results	1 1 0 1 0 0 0 0	in population with unknown status 2 : 0
Number of results	0 0 1 1 0 0 0 0	in population with unknown status 2 : 0
Number of results	1 0 1 1 0 0 0 0	in population with unknown status 2 : 0
Number of results	0 1 1 1 0 0 0 0	in population with unknown status 2 : 0
Number of results	1 1 1 1 0 0 0 0	in population with unknown status 2 : 0
Number of results	0 0 0 0 1 0 0 0	in population with unknown status 2 : 1
Number of results	1 0 0 0 1 0 0 0	in population with unknown status 2 : 0
Number of results	0 1 0 0 1 0 0 0	in population with unknown status 2 : 0
Number of results	1 1 0 0 1 0 0 0	in population with unknown status 2 : 0
Number of results	0 0 1 0 1 0 0 0	in population with unknown status 2 : 0
Number of results	1 0 1 0 1 0 0 0	in population with unknown status 2 : 0
Number of results	0 1 1 0 1 0 0 0	in population with unknown status 2 : 0
Number of results	1 1 1 0 1 0 0 0	in population with unknown status 2 : 0
Number of results	0 0 0 1 1 0 0 0	in population with unknown status 2 : 0
Number of results	1 0 0 1 1 0 0 0	in population with unknown status 2 : 0
Number of results	0 1 0 1 1 0 0 0	in population with unknown status 2 : 0

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Number of results 1 1 1 0 1 1 1 1 in population with unknown status 2 : 0
 Number of results 0 0 0 1 1 1 1 1 in population with unknown status 2 : 0
 Number of results 1 0 0 1 1 1 1 1 in population with unknown status 2 : 0
 Number of results 0 1 0 1 1 1 1 1 in population with unknown status 2 : 0
 Number of results 1 1 0 1 1 1 1 1 in population with unknown status 2 : 0
 Number of results 0 0 1 1 1 1 1 1 in population with unknown status 2 : 0
 Number of results 1 0 1 1 1 1 1 1 in population with unknown status 2 : 0
 Number of results 0 1 1 1 1 1 1 1 in population with unknown status 2 : 0
 Number of results 1 1 1 1 1 1 1 1 in population with unknown status 2 : 31

DATA SUMMARY

2 Population(s); 8 Tests; 0 Reference Population(s)

df: 510 ; parameters: 18

	test1	test2	test3	test4	test5	test6	test7	test8	pop1	pop2	RefInd	RefInf
1	0	0	0	0	0	0	0	0	254	144	0	0
2	1	0	0	0	0	0	0	0	0	0	0	0
3	0	1	0	0	0	0	0	0	0	0	0	0
4	1	1	0	0	0	0	0	0	0	0	0	0
5	0	0	1	0	0	0	0	0	0	0	0	0
6	1	0	1	0	0	0	0	0	0	0	0	0
7	0	1	1	0	0	0	0	0	0	0	0	0
8	1	1	1	0	0	0	0	0	0	0	0	0
9	0	0	0	1	0	0	0	0	0	0	0	0
10	1	0	0	1	0	0	0	0	0	0	0	0
11	0	1	0	1	0	0	0	0	0	0	0	0
12	1	1	0	1	0	0	0	0	0	0	0	0
13	0	0	1	1	0	0	0	0	0	0	0	0
14	1	0	1	1	0	0	0	0	0	0	0	0
15	0	1	1	1	0	0	0	0	0	0	0	0
16	1	1	1	1	0	0	0	0	0	0	0	0
17	0	0	0	0	1	0	0	0	0	1	0	0
18	1	0	0	0	1	0	0	0	0	0	0	0
19	0	1	0	0	1	0	0	0	0	0	0	0
20	1	1	0	0	1	0	0	0	0	0	0	0
21	0	0	1	0	1	0	0	0	0	0	0	0
22	1	0	1	0	1	0	0	0	0	0	0	0
23	0	1	1	0	1	0	0	0	0	0	0	0
24	1	1	1	0	1	0	0	0	1	0	0	0
25	0	0	0	1	1	0	0	0	0	0	0	0
26	1	0	0	1	1	0	0	0	0	0	0	0
27	0	1	0	1	1	0	0	0	0	0	0	0

28	1	1	0	1	1	0	0	0	0	0	0	0
29	0	0	1	1	1	0	0	0	0	0	0	0
30	1	0	1	1	1	0	0	0	0	0	0	0
31	0	1	1	1	1	0	0	0	0	0	0	0
32	1	1	1	1	1	0	0	0	0	0	0	0
33	0	0	0	0	0	1	0	0	0	0	0	0
34	1	0	0	0	0	1	0	0	0	0	0	0
35	0	1	0	0	0	1	0	0	0	0	0	0
36	1	1	0	0	0	1	0	0	0	0	0	0
37	0	0	1	0	0	1	0	0	0	0	0	0
38	1	0	1	0	0	1	0	0	0	0	0	0
39	0	1	1	0	0	1	0	0	0	0	0	0
40	1	1	1	0	0	1	0	0	0	0	0	0
41	0	0	0	1	0	1	0	0	0	0	0	0
42	1	0	0	1	0	1	0	0	0	0	0	0
43	0	1	0	1	0	1	0	0	0	0	0	0
44	1	1	0	1	0	1	0	0	0	0	0	0
45	0	0	1	1	0	1	0	0	0	0	0	0
46	1	0	1	1	0	1	0	0	0	0	0	0
47	0	1	1	1	0	1	0	0	0	0	0	0
48	1	1	1	1	0	1	0	0	0	0	0	0
49	0	0	0	0	1	1	0	0	0	0	0	0
50	1	0	0	0	1	1	0	0	0	0	0	0
51	0	1	0	0	1	1	0	0	0	0	0	0
52	1	1	0	0	1	1	0	0	0	0	0	0
53	0	0	1	0	1	1	0	0	0	0	0	0
54	1	0	1	0	1	1	0	0	0	0	0	0
55	0	1	1	0	1	1	0	0	0	0	0	0
56	1	1	1	0	1	1	0	0	0	0	0	0
57	0	0	0	1	1	1	0	0	0	0	0	0
58	1	0	0	1	1	1	0	0	0	0	0	0
59	0	1	0	1	1	1	0	0	0	0	0	0
60	1	1	0	1	1	1	0	0	0	0	0	0
61	0	0	1	1	1	1	0	0	0	0	0	0
62	1	0	1	1	1	1	0	0	0	0	0	0
63	0	1	1	1	1	1	0	0	0	0	0	0
64	1	1	1	1	1	1	0	0	0	0	0	0
65	0	0	0	0	0	0	1	0	0	0	0	0
66	1	0	0	0	0	0	1	0	0	0	0	0
67	0	1	0	0	0	0	1	0	0	0	0	0
68	1	1	0	0	0	0	1	0	0	0	0	0
69	0	0	1	0	0	0	1	0	0	0	0	0
70	1	0	1	0	0	0	1	0	0	0	0	0
71	0	1	1	0	0	0	1	0	0	0	0	0

72	1	1	1	0	0	0	1	0	0	0	0	0
73	0	0	0	1	0	0	1	0	0	0	0	0
74	1	0	0	1	0	0	1	0	0	0	0	0
75	0	1	0	1	0	0	1	0	0	0	0	0
76	1	1	0	1	0	0	1	0	0	0	0	0
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78	1	0	1	1	0	0	1	0	0	0	0	0
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81	0	0	0	0	1	0	1	0	0	0	0	0
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83	0	1	0	0	1	0	1	0	0	0	0	0
84	1	1	0	0	1	0	1	0	0	0	0	0
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98	1	0	0	0	0	1	1	0	0	0	0	0
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104	1	1	1	0	0	1	1	0	0	0	0	0
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107	0	1	0	1	0	1	1	0	0	0	0	0
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110	1	0	1	1	0	1	1	0	0	0	0	0
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114	1	0	0	0	1	1	1	0	0	0	0	0
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120	1	1	1	0	1	1	1	0	0	0	0	0
121	0	0	0	1	1	1	1	0	1	0	0	0
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123	0	1	0	1	1	1	1	0	0	0	0	0
124	1	1	0	1	1	1	1	0	0	0	0	0
125	0	0	1	1	1	1	1	0	0	0	0	0
126	1	0	1	1	1	1	1	0	0	0	0	0
127	0	1	1	1	1	1	1	0	2	0	0	0
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143	0	1	1	1	0	0	0	1	0	0	0	0
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151	0	1	1	0	1	0	0	1	0	0	0	0
152	1	1	1	0	1	0	0	1	0	0	0	0
153	0	0	0	1	1	0	0	1	0	0	0	0
154	1	0	0	1	1	0	0	1	0	0	0	0
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158	1	0	1	1	1	0	0	1	0	0	0	0
159	0	1	1	1	1	0	0	1	0	0	0	0

160	1	1	1	1	1	0	0	1	0	0	0	0
161	0	0	0	0	0	1	0	1	0	0	0	0
162	1	0	0	0	0	1	0	1	0	0	0	0
163	0	1	0	0	0	1	0	1	6	4	0	0
164	1	1	0	0	0	1	0	1	0	0	0	0
165	0	0	1	0	0	1	0	1	0	0	0	0
166	1	0	1	0	0	1	0	1	0	0	0	0
167	0	1	1	0	0	1	0	1	0	0	0	0
168	1	1	1	0	0	1	0	1	0	0	0	0
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171	0	1	0	1	0	1	0	1	0	0	0	0
172	1	1	0	1	0	1	0	1	0	0	0	0
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179	0	1	0	0	1	1	0	1	0	0	0	0
180	1	1	0	0	1	1	0	1	0	0	0	0
181	0	0	1	0	1	1	0	1	0	0	0	0
182	1	0	1	0	1	1	0	1	0	0	0	0
183	0	1	1	0	1	1	0	1	0	0	0	0
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187	0	1	0	1	1	1	0	1	0	0	0	0
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189	0	0	1	1	1	1	0	1	0	0	0	0
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191	0	1	1	1	1	1	0	1	0	0	0	0
192	1	1	1	1	1	1	0	1	0	0	0	0
193	0	0	0	0	0	0	1	1	4	2	0	0
194	1	0	0	0	0	0	1	1	0	0	0	0
195	0	1	0	0	0	0	1	1	0	0	0	0
196	1	1	0	0	0	0	1	1	0	0	0	0
197	0	0	1	0	0	0	1	1	11	9	0	0
198	1	0	1	0	0	0	1	1	0	0	0	0
199	0	1	1	0	0	0	1	1	0	0	0	0
200	1	1	1	0	0	0	1	1	0	0	0	0
201	0	0	0	1	0	0	1	1	0	0	0	0
202	1	0	0	1	0	0	1	1	0	0	0	0
203	0	1	0	1	0	0	1	1	0	0	0	0

204	1	1	0	1	0	0	1	1	0	0	0	0
205	0	0	1	1	0	0	1	1	0	0	0	0
206	1	0	1	1	0	0	1	1	0	0	0	0
207	0	1	1	1	0	0	1	1	0	0	0	0
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209	0	0	0	0	1	0	1	1	0	0	0	0
210	1	0	0	0	1	0	1	1	0	0	0	0
211	0	1	0	0	1	0	1	1	0	0	0	0
212	1	1	0	0	1	0	1	1	0	0	0	0
213	0	0	1	0	1	0	1	1	0	0	0	0
214	1	0	1	0	1	0	1	1	0	0	0	0
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217	0	0	0	1	1	0	1	1	0	0	0	0
218	1	0	0	1	1	0	1	1	0	0	0	0
219	0	1	0	1	1	0	1	1	0	0	0	0
220	1	1	0	1	1	0	1	1	0	0	0	0
221	0	0	1	1	1	0	1	1	0	0	0	0
222	1	0	1	1	1	0	1	1	0	0	0	0
223	0	1	1	1	1	0	1	1	0	0	0	0
224	1	1	1	1	1	0	1	1	0	0	0	0
225	0	0	0	0	0	1	1	1	0	0	0	0
226	1	0	0	0	0	1	1	1	0	0	0	0
227	0	1	0	0	0	1	1	1	0	0	0	0
228	1	1	0	0	0	1	1	1	0	0	0	0
229	0	0	1	0	0	1	1	1	0	0	0	0
230	1	0	1	0	0	1	1	1	0	0	0	0
231	0	1	1	0	0	1	1	1	0	0	0	0
232	1	1	1	0	0	1	1	1	7	1	0	0
233	0	0	0	1	0	1	1	1	0	0	0	0
234	1	0	0	1	0	1	1	1	0	1	0	0
235	0	1	0	1	0	1	1	1	0	0	0	0
236	1	1	0	1	0	1	1	1	0	0	0	0
237	0	0	1	1	0	1	1	1	0	0	0	0
238	1	0	1	1	0	1	1	1	0	0	0	0
239	0	1	1	1	0	1	1	1	0	0	0	0
240	1	1	1	1	0	1	1	1	7	10	0	0
241	0	0	0	0	1	1	1	1	0	0	0	0
242	1	0	0	0	1	1	1	1	0	0	0	0
243	0	1	0	0	1	1	1	1	0	0	0	0
244	1	1	0	0	1	1	1	1	0	0	0	0
245	0	0	1	0	1	1	1	1	0	0	0	0
246	1	0	1	0	1	1	1	1	0	0	0	0
247	0	1	1	0	1	1	1	1	0	0	0	0

[illegible]

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

47	0	1	1	1	0	1	0	0	0	0	0	0
48	1	1	1	1	0	1	0	0	0	0	0	0
49	0	0	0	0	1	1	0	0	0	0	0	0
50	1	0	0	0	1	1	0	0	0	0	0	0
51	0	1	0	0	1	1	0	0	0	0	0	0
52	1	1	0	0	1	1	0	0	0	0	0	0
53	0	0	1	0	1	1	0	0	0	0	0	0
54	1	0	1	0	1	1	0	0	0	0	0	0
55	0	1	1	0	1	1	0	0	0	0	0	0
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57	0	0	0	1	1	1	0	0	0	0	0	0
58	1	0	0	1	1	1	0	0	0	0	0	0
59	0	1	0	1	1	1	0	0	0	0	0	0
60	1	1	0	1	1	1	0	0	0	0	0	0
61	0	0	1	1	1	1	0	0	0	0	0	0
62	1	0	1	1	1	1	0	0	0	0	0	0
63	0	1	1	1	1	1	0	0	0	0	0	0
64	1	1	1	1	1	1	0	0	0	0	0	0
65	0	0	0	0	0	0	1	0	0	0	0	0
66	1	0	0	0	0	0	1	0	0	0	0	0
67	0	1	0	0	0	0	1	0	0	0	0	0
68	1	1	0	0	0	0	1	0	0	0	0	0
69	0	0	1	0	0	0	1	0	0	0	0	0
70	1	0	1	0	0	0	1	0	0	0	0	0
71	0	1	1	0	0	0	1	0	0	0	0	0
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73	0	0	0	1	0	0	1	0	0	0	0	0
74	1	0	0	1	0	0	1	0	0	0	0	0
75	0	1	0	1	0	0	1	0	0	0	0	0
76	1	1	0	1	0	0	1	0	0	0	0	0
77	0	0	1	1	0	0	1	0	0	0	0	0
78	1	0	1	1	0	0	1	0	0	0	0	0
79	0	1	1	1	0	0	1	0	0	0	0	0
80	1	1	1	1	0	0	1	0	0	0	0	0
81	0	0	0	0	1	0	1	0	0	0	0	0
82	1	0	0	0	1	0	1	0	0	0	0	0
83	0	1	0	0	1	0	1	0	0	0	0	0
84	1	1	0	0	1	0	1	0	0	0	0	0
85	0	0	1	0	1	0	1	0	0	0	0	0
86	1	0	1	0	1	0	1	0	0	0	0	0
87	0	1	1	0	1	0	1	0	0	0	0	0
88	1	1	1	0	1	0	1	0	0	0	0	0
89	0	0	0	1	1	0	1	0	0	0	0	0
90	1	0	0	1	1	0	1	0	0	0	0	0

91	0	1	0	1	1	0	1	0	0	0	0	0
92	1	1	0	1	1	0	1	0	0	0	0	0
93	0	0	1	1	1	0	1	0	0	0	0	0
94	1	0	1	1	1	0	1	0	0	0	0	0
95	0	1	1	1	1	0	1	0	0	0	0	0
96	1	1	1	1	1	0	1	0	0	0	0	0
97	0	0	0	0	0	1	1	0	0	0	0	0
98	1	0	0	0	0	1	1	0	0	0	0	0
99	0	1	0	0	0	1	1	0	0	0	0	0
100	1	1	0	0	0	1	1	0	0	0	0	0
101	0	0	1	0	0	1	1	0	0	0	0	0
102	1	0	1	0	0	1	1	0	0	0	0	0
103	0	1	1	0	0	1	1	0	0	0	0	0
104	1	1	1	0	0	1	1	0	0	0	0	0
105	0	0	0	1	0	1	1	0	0	0	0	0
106	1	0	0	1	0	1	1	0	0	0	0	0
107	0	1	0	1	0	1	1	0	0	0	0	0
108	1	1	0	1	0	1	1	0	0	0	0	0
109	0	0	1	1	0	1	1	0	0	2	0	0
110	1	0	1	1	0	1	1	0	0	0	0	0
111	0	1	1	1	0	1	1	0	1	0	0	0
112	1	1	1	1	0	1	1	0	0	0	0	0
113	0	0	0	0	1	1	1	0	0	0	0	0
114	1	0	0	0	1	1	1	0	0	0	0	0
115	0	1	0	0	1	1	1	0	0	0	0	0
116	1	1	0	0	1	1	1	0	0	0	0	0
117	0	0	1	0	1	1	1	0	0	0	0	0
118	1	0	1	0	1	1	1	0	0	0	0	0
119	0	1	1	0	1	1	1	0	0	0	0	0
120	1	1	1	0	1	1	1	0	0	0	0	0
121	0	0	0	1	1	1	1	0	1	0	0	0
122	1	0	0	1	1	1	1	0	0	0	0	0
123	0	1	0	1	1	1	1	0	0	0	0	0
124	1	1	0	1	1	1	1	0	0	0	0	0
125	0	0	1	1	1	1	1	0	0	0	0	0
126	1	0	1	1	1	1	1	0	0	0	0	0
127	0	1	1	1	1	1	1	0	2	0	0	0
128	1	1	1	1	1	1	1	0	0	0	0	0
129	0	0	0	0	0	0	0	1	0	0	0	0
130	1	0	0	0	0	0	0	1	0	0	0	0
131	0	1	0	0	0	0	0	1	0	0	0	0
132	1	1	0	0	0	0	0	1	0	0	0	0
133	0	0	1	0	0	0	0	1	0	0	0	0
134	1	0	1	0	0	0	0	1	0	0	0	0

135	0	1	1	0	0	0	0	1	0	0	0	0
136	1	1	1	0	0	0	0	1	0	0	0	0
137	0	0	0	1	0	0	0	1	0	0	0	0
138	1	0	0	1	0	0	0	1	0	0	0	0
139	0	1	0	1	0	0	0	1	0	0	0	0
140	1	1	0	1	0	0	0	1	0	0	0	0
141	0	0	1	1	0	0	0	1	0	0	0	0
142	1	0	1	1	0	0	0	1	0	0	0	0
143	0	1	1	1	0	0	0	1	0	0	0	0
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145	0	0	0	0	1	0	0	1	0	0	0	0
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147	0	1	0	0	1	0	0	1	0	0	0	0
148	1	1	0	0	1	0	0	1	0	0	0	0
149	0	0	1	0	1	0	0	1	0	0	0	0
150	1	0	1	0	1	0	0	1	0	0	0	0
151	0	1	1	0	1	0	0	1	0	0	0	0
152	1	1	1	0	1	0	0	1	0	0	0	0
153	0	0	0	1	1	0	0	1	0	0	0	0
154	1	0	0	1	1	0	0	1	0	0	0	0
155	0	1	0	1	1	0	0	1	0	0	0	0
156	1	1	0	1	1	0	0	1	0	0	0	0
157	0	0	1	1	1	0	0	1	0	0	0	0
158	1	0	1	1	1	0	0	1	0	0	0	0
159	0	1	1	1	1	0	0	1	0	0	0	0
160	1	1	1	1	1	0	0	1	0	0	0	0
161	0	0	0	0	0	1	0	1	0	0	0	0
162	1	0	0	0	0	1	0	1	0	0	0	0
163	0	1	0	0	0	1	0	1	6	4	0	0
164	1	1	0	0	0	1	0	1	0	0	0	0
165	0	0	1	0	0	1	0	1	0	0	0	0
166	1	0	1	0	0	1	0	1	0	0	0	0
167	0	1	1	0	0	1	0	1	0	0	0	0
168	1	1	1	0	0	1	0	1	0	0	0	0
169	0	0	0	1	0	1	0	1	0	0	0	0
170	1	0	0	1	0	1	0	1	0	0	0	0
171	0	1	0	1	0	1	0	1	0	0	0	0
172	1	1	0	1	0	1	0	1	0	0	0	0
173	0	0	1	1	0	1	0	1	0	0	0	0
174	1	0	1	1	0	1	0	1	0	0	0	0
175	0	1	1	1	0	1	0	1	0	0	0	0
176	1	1	1	1	0	1	0	1	0	0	0	0
177	0	0	0	0	1	1	0	1	0	0	0	0
178	1	0	0	0	1	1	0	1	0	0	0	0

179	0	1	0	0	1	1	0	1	0	0	0	0
180	1	1	0	0	1	1	0	1	0	0	0	0
181	0	0	1	0	1	1	0	1	0	0	0	0
182	1	0	1	0	1	1	0	1	0	0	0	0
183	0	1	1	0	1	1	0	1	0	0	0	0
184	1	1	1	0	1	1	0	1	0	0	0	0
185	0	0	0	1	1	1	0	1	0	0	0	0
186	1	0	0	1	1	1	0	1	0	0	0	0
187	0	1	0	1	1	1	0	1	0	0	0	0
188	1	1	0	1	1	1	0	1	0	0	0	0
189	0	0	1	1	1	1	0	1	0	0	0	0
190	1	0	1	1	1	1	0	1	0	0	0	0
191	0	1	1	1	1	1	0	1	0	0	0	0
192	1	1	1	1	1	1	0	1	0	0	0	0
193	0	0	0	0	0	0	1	1	4	2	0	0
194	1	0	0	0	0	0	1	1	0	0	0	0
195	0	1	0	0	0	0	1	1	0	0	0	0
196	1	1	0	0	0	0	1	1	0	0	0	0
197	0	0	1	0	0	0	1	1	11	9	0	0
198	1	0	1	0	0	0	1	1	0	0	0	0
199	0	1	1	0	0	0	1	1	0	0	0	0
200	1	1	1	0	0	0	1	1	0	0	0	0
201	0	0	0	1	0	0	1	1	0	0	0	0
202	1	0	0	1	0	0	1	1	0	0	0	0
203	0	1	0	1	0	0	1	1	0	0	0	0
204	1	1	0	1	0	0	1	1	0	0	0	0
205	0	0	1	1	0	0	1	1	0	0	0	0
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207	0	1	1	1	0	0	1	1	0	0	0	0
208	1	1	1	1	0	0	1	1	0	0	0	0
209	0	0	0	0	1	0	1	1	0	0	0	0
210	1	0	0	0	1	0	1	1	0	0	0	0
211	0	1	0	0	1	0	1	1	0	0	0	0
212	1	1	0	0	1	0	1	1	0	0	0	0
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215	0	1	1	0	1	0	1	1	0	0	0	0
216	1	1	1	0	1	0	1	1	0	0	0	0
217	0	0	0	1	1	0	1	1	0	0	0	0
218	1	0	0	1	1	0	1	1	0	0	0	0
219	0	1	0	1	1	0	1	1	0	0	0	0
220	1	1	0	1	1	0	1	1	0	0	0	0
221	0	0	1	1	1	0	1	1	0	0	0	0
222	1	0	1	1	1	0	1	1	0	0	0	0

223	0	1	1	1	1	0	1	1	0	0	0	0
224	1	1	1	1	1	0	1	1	0	0	0	0
225	0	0	0	0	0	1	1	1	0	0	0	0
226	1	0	0	0	0	1	1	1	0	0	0	0
227	0	1	0	0	0	1	1	1	0	0	0	0
228	1	1	0	0	0	1	1	1	0	0	0	0
229	0	0	1	0	0	1	1	1	0	0	0	0
230	1	0	1	0	0	1	1	1	0	0	0	0
231	0	1	1	0	0	1	1	1	0	0	0	0
232	1	1	1	0	0	1	1	1	7	1	0	0
233	0	0	0	1	0	1	1	1	0	0	0	0
234	1	0	0	1	0	1	1	1	0	1	0	0
235	0	1	0	1	0	1	1	1	0	0	0	0
236	1	1	0	1	0	1	1	1	0	0	0	0
237	0	0	1	1	0	1	1	1	0	0	0	0
238	1	0	1	1	0	1	1	1	0	0	0	0
239	0	1	1	1	0	1	1	1	0	0	0	0
240	1	1	1	1	0	1	1	1	7	10	0	0
241	0	0	0	0	1	1	1	1	0	0	0	0
242	1	0	0	0	1	1	1	1	0	0	0	0
243	0	1	0	0	1	1	1	1	0	0	0	0
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245	0	0	1	0	1	1	1	1	0	0	0	0
246	1	0	1	0	1	1	1	1	0	0	0	0
247	0	1	1	0	1	1	1	1	0	0	0	0
248	1	1	1	0	1	1	1	1	0	0	0	0
249	0	0	0	1	1	1	1	1	0	0	0	0
250	1	0	0	1	1	1	1	1	0	0	0	0
251	0	1	0	1	1	1	1	1	0	0	0	0
252	1	1	0	1	1	1	1	1	0	0	0	0
253	0	0	1	1	1	1	1	1	0	0	0	0
254	1	0	1	1	1	1	1	1	0	0	0	0
255	0	1	1	1	1	1	1	1	0	0	0	0
256	1	1	1	1	1	1	1	1	44	31	0	0

	pre1	pre2	Sp1	Sp2	Sp3	Sp4	Sp5	Sp6	Sp7	Sp8	Se1	Se2	Se3	Se4
Best Guess	0.2	0.2	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.8	0.8	0.8
	Se5	Se6	Se7	Se8										
Best Guess	0.8	0.8	0.8	0.8										

EXPECTATION MAXIMISATION

\$Iterations

[1] 7

10	1	0	0	1	0	0	0	0	0	0	0	0
11	0	1	0	1	0	0	0	0	0	0	0	0
12	1	1	0	1	0	0	0	0	0	0	0	0
13	0	0	1	1	0	0	0	0	0	0	0	0
14	1	0	1	1	0	0	0	0	0	0	0	0
15	0	1	1	1	0	0	0	0	0	0	0	0
16	1	1	1	1	0	0	0	0	0	0	0	0
17	0	0	0	0	1	0	0	0	0	1	0	0
18	1	0	0	0	1	0	0	0	0	0	0	0
19	0	1	0	0	1	0	0	0	0	0	0	0
20	1	1	0	0	1	0	0	0	0	0	0	0
21	0	0	1	0	1	0	0	0	0	0	0	0
22	1	0	1	0	1	0	0	0	0	0	0	0
23	0	1	1	0	1	0	0	0	0	0	0	0
24	1	1	1	0	1	0	0	0	1	0	0	0
25	0	0	0	1	1	0	0	0	0	0	0	0
26	1	0	0	1	1	0	0	0	0	0	0	0
27	0	1	0	1	1	0	0	0	0	0	0	0
28	1	1	0	1	1	0	0	0	0	0	0	0
29	0	0	1	1	1	0	0	0	0	0	0	0
30	1	0	1	1	1	0	0	0	0	0	0	0
31	0	1	1	1	1	0	0	0	0	0	0	0
32	1	1	1	1	1	0	0	0	0	0	0	0
33	0	0	0	0	0	1	0	0	0	0	0	0
34	1	0	0	0	0	1	0	0	0	0	0	0
35	0	1	0	0	0	1	0	0	0	0	0	0
36	1	1	0	0	0	1	0	0	0	0	0	0
37	0	0	1	0	0	1	0	0	0	0	0	0
38	1	0	1	0	0	1	0	0	0	0	0	0
39	0	1	1	0	0	1	0	0	0	0	0	0
40	1	1	1	0	0	1	0	0	0	0	0	0
41	0	0	0	1	0	1	0	0	0	0	0	0
42	1	0	0	1	0	1	0	0	0	0	0	0
43	0	1	0	1	0	1	0	0	0	0	0	0
44	1	1	0	1	0	1	0	0	0	0	0	0
45	0	0	1	1	0	1	0	0	0	0	0	0
46	1	0	1	1	0	1	0	0	0	0	0	0
47	0	1	1	1	0	1	0	0	0	0	0	0
48	1	1	1	1	0	1	0	0	0	0	0	0
49	0	0	0	0	1	1	0	0	0	0	0	0
50	1	0	0	0	1	1	0	0	0	0	0	0
51	0	1	0	0	1	1	0	0	0	0	0	0
52	1	1	0	0	1	1	0	0	0	0	0	0
53	0	0	1	0	1	1	0	0	0	0	0	0

54	1	0	1	0	1	1	0	0	0	0	0	0
55	0	1	1	0	1	1	0	0	0	0	0	0
56	1	1	1	0	1	1	0	0	0	0	0	0
57	0	0	0	1	1	1	0	0	0	0	0	0
58	1	0	0	1	1	1	0	0	0	0	0	0
59	0	1	0	1	1	1	0	0	0	0	0	0
60	1	1	0	1	1	1	0	0	0	0	0	0
61	0	0	1	1	1	1	0	0	0	0	0	0
62	1	0	1	1	1	1	0	0	0	0	0	0
63	0	1	1	1	1	1	0	0	0	0	0	0
64	1	1	1	1	1	1	0	0	0	0	0	0
65	0	0	0	0	0	0	1	0	0	0	0	0
66	1	0	0	0	0	0	1	0	0	0	0	0
67	0	1	0	0	0	0	1	0	0	0	0	0
68	1	1	0	0	0	0	1	0	0	0	0	0
69	0	0	1	0	0	0	1	0	0	0	0	0
70	1	0	1	0	0	0	1	0	0	0	0	0
71	0	1	1	0	0	0	1	0	0	0	0	0
72	1	1	1	0	0	0	1	0	0	0	0	0
73	0	0	0	1	0	0	1	0	0	0	0	0
74	1	0	0	1	0	0	1	0	0	0	0	0
75	0	1	0	1	0	0	1	0	0	0	0	0
76	1	1	0	1	0	0	1	0	0	0	0	0
77	0	0	1	1	0	0	1	0	0	0	0	0
78	1	0	1	1	0	0	1	0	0	0	0	0
79	0	1	1	1	0	0	1	0	0	0	0	0
80	1	1	1	1	0	0	1	0	0	0	0	0
81	0	0	0	0	1	0	1	0	0	0	0	0
82	1	0	0	0	1	0	1	0	0	0	0	0
83	0	1	0	0	1	0	1	0	0	0	0	0
84	1	1	0	0	1	0	1	0	0	0	0	0
85	0	0	1	0	1	0	1	0	0	0	0	0
86	1	0	1	0	1	0	1	0	0	0	0	0
87	0	1	1	0	1	0	1	0	0	0	0	0
88	1	1	1	0	1	0	1	0	0	0	0	0
89	0	0	0	1	1	0	1	0	0	0	0	0
90	1	0	0	1	1	0	1	0	0	0	0	0
91	0	1	0	1	1	0	1	0	0	0	0	0
92	1	1	0	1	1	0	1	0	0	0	0	0
93	0	0	1	1	1	0	1	0	0	0	0	0
94	1	0	1	1	1	0	1	0	0	0	0	0
95	0	1	1	1	1	0	1	0	0	0	0	0
96	1	1	1	1	1	0	1	0	0	0	0	0
97	0	0	0	0	0	1	1	0	0	0	0	0

98	1	0	0	0	0	1	1	0	0	0	0	0
99	0	1	0	0	0	1	1	0	0	0	0	0
100	1	1	0	0	0	1	1	0	0	0	0	0
101	0	0	1	0	0	1	1	0	0	0	0	0
102	1	0	1	0	0	1	1	0	0	0	0	0
103	0	1	1	0	0	1	1	0	0	0	0	0
104	1	1	1	0	0	1	1	0	0	0	0	0
105	0	0	0	1	0	1	1	0	0	0	0	0
106	1	0	0	1	0	1	1	0	0	0	0	0
107	0	1	0	1	0	1	1	0	0	0	0	0
108	1	1	0	1	0	1	1	0	0	0	0	0
109	0	0	1	1	0	1	1	0	0	2	0	0
110	1	0	1	1	0	1	1	0	0	0	0	0
111	0	1	1	1	0	1	1	0	1	0	0	0
112	1	1	1	1	0	1	1	0	0	0	0	0
113	0	0	0	0	1	1	1	0	0	0	0	0
114	1	0	0	0	1	1	1	0	0	0	0	0
115	0	1	0	0	1	1	1	0	0	0	0	0
116	1	1	0	0	1	1	1	0	0	0	0	0
117	0	0	1	0	1	1	1	0	0	0	0	0
118	1	0	1	0	1	1	1	0	0	0	0	0
119	0	1	1	0	1	1	1	0	0	0	0	0
120	1	1	1	0	1	1	1	0	0	0	0	0
121	0	0	0	1	1	1	1	0	1	0	0	0
122	1	0	0	1	1	1	1	0	0	0	0	0
123	0	1	0	1	1	1	1	0	0	0	0	0
124	1	1	0	1	1	1	1	0	0	0	0	0
125	0	0	1	1	1	1	1	0	0	0	0	0
126	1	0	1	1	1	1	1	0	0	0	0	0
127	0	1	1	1	1	1	1	0	2	0	0	0
128	1	1	1	1	1	1	1	0	0	0	0	0
129	0	0	0	0	0	0	0	1	0	0	0	0
130	1	0	0	0	0	0	0	1	0	0	0	0
131	0	1	0	0	0	0	0	1	0	0	0	0
132	1	1	0	0	0	0	0	1	0	0	0	0
133	0	0	1	0	0	0	0	1	0	0	0	0
134	1	0	1	0	0	0	0	1	0	0	0	0
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139	0	1	0	1	0	0	0	1	0	0	0	0
140	1	1	0	1	0	0	0	1	0	0	0	0
141	0	0	1	1	0	0	0	1	0	0	0	0

142	1	0	1	1	0	0	0	1	0	0	0	0
143	0	1	1	1	0	0	0	1	0	0	0	0
144	1	1	1	1	0	0	0	1	0	0	0	0
145	0	0	0	0	1	0	0	1	0	0	0	0
146	1	0	0	0	1	0	0	1	0	0	0	0
147	0	1	0	0	1	0	0	1	0	0	0	0
148	1	1	0	0	1	0	0	1	0	0	0	0
149	0	0	1	0	1	0	0	1	0	0	0	0
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151	0	1	1	0	1	0	0	1	0	0	0	0
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154	1	0	0	1	1	0	0	1	0	0	0	0
155	0	1	0	1	1	0	0	1	0	0	0	0
156	1	1	0	1	1	0	0	1	0	0	0	0
157	0	0	1	1	1	0	0	1	0	0	0	0
158	1	0	1	1	1	0	0	1	0	0	0	0
159	0	1	1	1	1	0	0	1	0	0	0	0
160	1	1	1	1	1	0	0	1	0	0	0	0
161	0	0	0	0	0	1	0	1	0	0	0	0
162	1	0	0	0	0	1	0	1	0	0	0	0
163	0	1	0	0	0	1	0	1	6	4	0	0
164	1	1	0	0	0	1	0	1	0	0	0	0
165	0	0	1	0	0	1	0	1	0	0	0	0
166	1	0	1	0	0	1	0	1	0	0	0	0
167	0	1	1	0	0	1	0	1	0	0	0	0
168	1	1	1	0	0	1	0	1	0	0	0	0
169	0	0	0	1	0	1	0	1	0	0	0	0
170	1	0	0	1	0	1	0	1	0	0	0	0
171	0	1	0	1	0	1	0	1	0	0	0	0
172	1	1	0	1	0	1	0	1	0	0	0	0
173	0	0	1	1	0	1	0	1	0	0	0	0
174	1	0	1	1	0	1	0	1	0	0	0	0
175	0	1	1	1	0	1	0	1	0	0	0	0
176	1	1	1	1	0	1	0	1	0	0	0	0
177	0	0	0	0	1	1	0	1	0	0	0	0
178	1	0	0	0	1	1	0	1	0	0	0	0
179	0	1	0	0	1	1	0	1	0	0	0	0
180	1	1	0	0	1	1	0	1	0	0	0	0
181	0	0	1	0	1	1	0	1	0	0	0	0
182	1	0	1	0	1	1	0	1	0	0	0	0
183	0	1	1	0	1	1	0	1	0	0	0	0
184	1	1	1	0	1	1	0	1	0	0	0	0
185	0	0	0	1	1	1	0	1	0	0	0	0

186	1	0	0	1	1	1	0	1	0	0	0	0
187	0	1	0	1	1	1	0	1	0	0	0	0
188	1	1	0	1	1	1	0	1	0	0	0	0
189	0	0	1	1	1	1	0	1	0	0	0	0
190	1	0	1	1	1	1	0	1	0	0	0	0
191	0	1	1	1	1	1	0	1	0	0	0	0
192	1	1	1	1	1	1	0	1	0	0	0	0
193	0	0	0	0	0	0	1	1	4	2	0	0
194	1	0	0	0	0	0	1	1	0	0	0	0
195	0	1	0	0	0	0	1	1	0	0	0	0
196	1	1	0	0	0	0	1	1	0	0	0	0
197	0	0	1	0	0	0	1	1	11	9	0	0
198	1	0	1	0	0	0	1	1	0	0	0	0
199	0	1	1	0	0	0	1	1	0	0	0	0
200	1	1	1	0	0	0	1	1	0	0	0	0
201	0	0	0	1	0	0	1	1	0	0	0	0
202	1	0	0	1	0	0	1	1	0	0	0	0
203	0	1	0	1	0	0	1	1	0	0	0	0
204	1	1	0	1	0	0	1	1	0	0	0	0
205	0	0	1	1	0	0	1	1	0	0	0	0
206	1	0	1	1	0	0	1	1	0	0	0	0
207	0	1	1	1	0	0	1	1	0	0	0	0
208	1	1	1	1	0	0	1	1	0	0	0	0
209	0	0	0	0	1	0	1	1	0	0	0	0
210	1	0	0	0	1	0	1	1	0	0	0	0
211	0	1	0	0	1	0	1	1	0	0	0	0
212	1	1	0	0	1	0	1	1	0	0	0	0
213	0	0	1	0	1	0	1	1	0	0	0	0
214	1	0	1	0	1	0	1	1	0	0	0	0
215	0	1	1	0	1	0	1	1	0	0	0	0
216	1	1	1	0	1	0	1	1	0	0	0	0
217	0	0	0	1	1	0	1	1	0	0	0	0
218	1	0	0	1	1	0	1	1	0	0	0	0
219	0	1	0	1	1	0	1	1	0	0	0	0
220	1	1	0	1	1	0	1	1	0	0	0	0
221	0	0	1	1	1	0	1	1	0	0	0	0
222	1	0	1	1	1	0	1	1	0	0	0	0
223	0	1	1	1	1	0	1	1	0	0	0	0
224	1	1	1	1	1	0	1	1	0	0	0	0
225	0	0	0	0	0	1	1	1	0	0	0	0
226	1	0	0	0	0	1	1	1	0	0	0	0
227	0	1	0	0	0	1	1	1	0	0	0	0
228	1	1	0	0	0	1	1	1	0	0	0	0
229	0	0	1	0	0	1	1	1	0	0	0	0

230	1	0	1	0	0	1	1	1	0	0	0	0
231	0	1	1	0	0	1	1	1	0	0	0	0
232	1	1	1	0	0	1	1	1	7	1	0	0
233	0	0	0	1	0	1	1	1	0	0	0	0
234	1	0	0	1	0	1	1	1	0	1	0	0
235	0	1	0	1	0	1	1	1	0	0	0	0
236	1	1	0	1	0	1	1	1	0	0	0	0
237	0	0	1	1	0	1	1	1	0	0	0	0
238	1	0	1	1	0	1	1	1	0	0	0	0
239	0	1	1	1	0	1	1	1	0	0	0	0
240	1	1	1	1	0	1	1	1	7	10	0	0
241	0	0	0	0	1	1	1	1	0	0	0	0
242	1	0	0	0	1	1	1	1	0	0	0	0
243	0	1	0	0	1	1	1	1	0	0	0	0
244	1	1	0	0	1	1	1	1	0	0	0	0
245	0	0	1	0	1	1	1	1	0	0	0	0
246	1	0	1	0	1	1	1	1	0	0	0	0
247	0	1	1	0	1	1	1	1	0	0	0	0
248	1	1	1	0	1	1	1	1	0	0	0	0
249	0	0	0	1	1	1	1	1	0	0	0	0
250	1	0	0	1	1	1	1	1	0	0	0	0
251	0	1	0	1	1	1	1	1	0	0	0	0
252	1	1	0	1	1	1	1	1	0	0	0	0
253	0	0	1	1	1	1	1	1	0	0	0	0
254	1	0	1	1	1	1	1	1	0	0	0	0
255	0	1	1	1	1	1	1	1	0	0	0	0
256	1	1	1	1	1	1	1	1	44	31	0	0

	ExpPop1	ExpPop2	ExpRefInd	ExpRefInf
1	215.50	125.38	0	0
2	0.00	0.00	0	0
3	5.06	2.95	0	0
4	0.00	0.00	0	0
5	10.38	6.04	0	0
6	0.00	0.00	0	0
7	0.24	0.14	0	0
8	0.00	0.00	0	0
9	0.00	0.00	0	0
10	0.00	0.00	0	0
11	0.00	0.00	0	0
12	0.00	0.00	0	0
13	0.00	0.00	0	0
14	0.00	0.00	0	0
15	0.00	0.00	0	0
16	0.00	0.00	0	0

17	0.50	0.29	0	0
18	0.00	0.00	0	0
19	0.01	0.01	0	0
20	0.00	0.00	0	0
21	0.02	0.01	0	0
22	0.00	0.00	0	0
23	0.00	0.00	0	0
24	0.00	0.00	0	0
25	0.00	0.00	0	0
26	0.00	0.00	0	0
27	0.00	0.00	0	0
28	0.00	0.00	0	0
29	0.00	0.00	0	0
30	0.00	0.00	0	0
31	0.00	0.00	0	0
32	0.00	0.00	0	0
33	5.06	2.95	0	0
34	0.00	0.00	0	0
35	0.12	0.07	0	0
36	0.00	0.00	0	0
37	0.24	0.14	0	0
38	0.00	0.00	0	0
39	0.01	0.00	0	0
40	0.00	0.00	0	0
41	0.00	0.00	0	0
42	0.00	0.00	0	0
43	0.00	0.00	0	0
44	0.00	0.00	0	0
45	0.00	0.00	0	0
46	0.00	0.00	0	0
47	0.00	0.00	0	0
48	0.01	0.01	0	0
49	0.01	0.01	0	0
50	0.00	0.00	0	0
51	0.00	0.00	0	0
52	0.00	0.00	0	0
53	0.00	0.00	0	0
54	0.00	0.00	0	0
55	0.00	0.00	0	0
56	0.00	0.00	0	0
57	0.00	0.00	0	0
58	0.00	0.00	0	0
59	0.00	0.00	0	0
60	0.00	0.00	0	0

61	0.00	0.00	0	0
62	0.00	0.00	0	0
63	0.00	0.00	0	0
64	0.02	0.02	0	0
65	13.69	7.97	0	0
66	0.00	0.00	0	0
67	0.32	0.19	0	0
68	0.00	0.00	0	0
69	0.66	0.38	0	0
70	0.00	0.00	0	0
71	0.02	0.01	0	0
72	0.00	0.00	0	0
73	0.00	0.00	0	0
74	0.00	0.00	0	0
75	0.00	0.00	0	0
76	0.00	0.00	0	0
77	0.00	0.00	0	0
78	0.00	0.00	0	0
79	0.00	0.00	0	0
80	0.01	0.01	0	0
81	0.03	0.02	0	0
82	0.00	0.00	0	0
83	0.00	0.00	0	0
84	0.00	0.00	0	0
85	0.00	0.00	0	0
86	0.00	0.00	0	0
87	0.00	0.00	0	0
88	0.00	0.00	0	0
89	0.00	0.00	0	0
90	0.00	0.00	0	0
91	0.00	0.00	0	0
92	0.00	0.00	0	0
93	0.00	0.00	0	0
94	0.00	0.00	0	0
95	0.00	0.00	0	0
96	0.02	0.02	0	0
97	0.32	0.19	0	0
98	0.00	0.00	0	0
99	0.01	0.00	0	0
100	0.00	0.00	0	0
101	0.02	0.01	0	0
102	0.00	0.00	0	0
103	0.01	0.00	0	0
104	0.08	0.06	0	0

105	0.00	0.00	0	0
106	0.00	0.00	0	0
107	0.00	0.00	0	0
108	0.02	0.01	0	0
109	0.00	0.00	0	0
110	0.03	0.02	0	0
111	0.05	0.04	0	0
112	0.88	0.63	0	0
113	0.00	0.00	0	0
114	0.00	0.00	0	0
115	0.00	0.00	0	0
116	0.00	0.00	0	0
117	0.00	0.00	0	0
118	0.01	0.01	0	0
119	0.01	0.01	0	0
120	0.22	0.16	0	0
121	0.00	0.00	0	0
122	0.00	0.00	0	0
123	0.00	0.00	0	0
124	0.05	0.03	0	0
125	0.01	0.00	0	0
126	0.09	0.07	0	0
127	0.14	0.10	0	0
128	2.40	1.71	0	0
129	19.43	11.31	0	0
130	0.00	0.00	0	0
131	0.46	0.27	0	0
132	0.00	0.00	0	0
133	0.94	0.54	0	0
134	0.00	0.00	0	0
135	0.02	0.01	0	0
136	0.00	0.00	0	0
137	0.00	0.00	0	0
138	0.00	0.00	0	0
139	0.00	0.00	0	0
140	0.00	0.00	0	0
141	0.00	0.00	0	0
142	0.00	0.00	0	0
143	0.00	0.00	0	0
144	0.00	0.00	0	0
145	0.04	0.03	0	0
146	0.00	0.00	0	0
147	0.00	0.00	0	0
148	0.00	0.00	0	0

149	0.00	0.00	0	0
150	0.00	0.00	0	0
151	0.00	0.00	0	0
152	0.00	0.00	0	0
153	0.00	0.00	0	0
154	0.00	0.00	0	0
155	0.00	0.00	0	0
156	0.00	0.00	0	0
157	0.00	0.00	0	0
158	0.00	0.00	0	0
159	0.00	0.00	0	0
160	0.00	0.00	0	0
161	0.46	0.27	0	0
162	0.00	0.00	0	0
163	0.01	0.01	0	0
164	0.00	0.00	0	0
165	0.02	0.01	0	0
166	0.00	0.00	0	0
167	0.00	0.00	0	0
168	0.01	0.01	0	0
169	0.00	0.00	0	0
170	0.00	0.00	0	0
171	0.00	0.00	0	0
172	0.00	0.00	0	0
173	0.00	0.00	0	0
174	0.00	0.00	0	0
175	0.01	0.01	0	0
176	0.12	0.09	0	0
177	0.00	0.00	0	0
178	0.00	0.00	0	0
179	0.00	0.00	0	0
180	0.00	0.00	0	0
181	0.00	0.00	0	0
182	0.00	0.00	0	0
183	0.00	0.00	0	0
184	0.03	0.02	0	0
185	0.00	0.00	0	0
186	0.00	0.00	0	0
187	0.00	0.00	0	0
188	0.01	0.00	0	0
189	0.00	0.00	0	0
190	0.01	0.01	0	0
191	0.02	0.01	0	0
192	0.33	0.23	0	0

193	1.23	0.72	0	0
194	0.00	0.00	0	0
195	0.03	0.02	0	0
196	0.00	0.00	0	0
197	0.06	0.03	0	0
198	0.00	0.00	0	0
199	0.00	0.00	0	0
200	0.01	0.01	0	0
201	0.00	0.00	0	0
202	0.00	0.00	0	0
203	0.00	0.00	0	0
204	0.00	0.00	0	0
205	0.00	0.00	0	0
206	0.00	0.00	0	0
207	0.01	0.01	0	0
208	0.12	0.09	0	0
209	0.00	0.00	0	0
210	0.00	0.00	0	0
211	0.00	0.00	0	0
212	0.00	0.00	0	0
213	0.00	0.00	0	0
214	0.00	0.00	0	0
215	0.00	0.00	0	0
216	0.03	0.02	0	0
217	0.00	0.00	0	0
218	0.00	0.00	0	0
219	0.00	0.00	0	0
220	0.01	0.00	0	0
221	0.00	0.00	0	0
222	0.01	0.01	0	0
223	0.02	0.01	0	0
224	0.33	0.23	0	0
225	0.03	0.02	0	0
226	0.00	0.00	0	0
227	0.00	0.00	0	0
228	0.02	0.02	0	0
229	0.00	0.00	0	0
230	0.04	0.03	0	0
231	0.07	0.05	0	0
232	1.16	0.83	0	0
233	0.00	0.00	0	0
234	0.01	0.01	0	0
235	0.01	0.01	0	0
236	0.24	0.17	0	0

237	0.03	0.02	0	0
238	0.49	0.35	0	0
239	0.75	0.54	0	0
240	12.71	9.08	0	0
241	0.00	0.00	0	0
242	0.00	0.00	0	0
243	0.00	0.00	0	0
244	0.06	0.04	0	0
245	0.01	0.01	0	0
246	0.12	0.09	0	0
247	0.19	0.13	0	0
248	3.15	2.25	0	0
249	0.00	0.00	0	0
250	0.03	0.02	0	0
251	0.04	0.03	0	0
252	0.66	0.47	0	0
253	0.08	0.06	0	0
254	1.33	0.95	0	0
255	2.04	1.46	0	0
256	34.59	24.71	0	0

\$Test

Max LogLikelihood: Achievable Obtained Deviance d.f. p value
-541.8923 -857.8069 631.8292 492 1.938381e-05

\$Commentary

[1] "The model does not fit: Assumptions may be not justified"

Residual correlations between test

\$ResCor

	Corr1-2	Corr1-3	Corr1-4	Corr1-5	Corr1-6
pop 1 :	0.02966545	0.02748822	-0.04146374	0.02335436	-0.007204700
pop 2 :	0.03676788	-0.01556004	0.04393568	0.01275859	0.008905438

	Corr1-7	Corr1-8	Corr2-3	Corr2-4	Corr2-5	Corr2-6
pop 1 :	0.0003667263	0.06535817	0.04146528	-0.01234181	0.03409523	0.12179659
pop 2 :	-0.0023577244	0.05369714	-0.02207883	0.01071037	0.01003414	0.08589943

	Corr2-7	Corr2-8	Corr3-4	Corr3-5	Corr3-6	Corr3-7
pop 1 :	0.01363943	0.1267421	-0.01302279	0.03147218	0.007666826	0.1957482
pop 2 :	-0.03651559	0.1205577	0.01348754	-0.03281901	-0.024305582	0.1829973

	Corr3-8	Corr4-5	Corr4-6	Corr4-7	Corr4-8	Corr5-6
pop 1 :	0.2007084	0.11974713	-0.009463266	-0.001237415	-0.01300391	0.01924680
pop 2 :	0.1809753	0.01560615	0.039334803	0.025655508	0.02724110	-0.03674752

	Corr5-7	Corr5-8	Corr6-7	Corr6-8	Corr7-8

```
pop 1 : 0.02362124 0.018492288 0.01576406 0.1127440 0.2519878
pop 2 : -0.04385803 0.004320285 -0.01371877 0.0908689 0.2325526
```

```
$Commentary
```

```
[1] "The residuals should be randomly distributed around 0"
```

```
BOOTSTRAP CONFIDENCE INTERVALS : 5000 samples
```

```
pre1 pre2 Sp1 Sp2 Sp3 Sp4 Sp5 Sp6 Sp7 Sp8 Se1
Clinf 0.1456 0.1612 1 0.9618 0.9329 1 0.993 0.9618 0.9169 0.8894 0.8969
Clsup 0.2278 0.2781 1 0.9907 0.9726 1 1.000 0.9907 0.9614 0.9424 0.9825
Se2 Se3 Se4 Se5 Se6 Se7 Se8
Clinf 0.9244 0.9524 0.8600 0.6442 0.9699 0.9696 0.8859
Clsup 0.9915 1.0000 0.9658 0.8130 1.0000 1.0000 0.9798
```

```
your data are stored in "new_8_double"
```

```
Note that you'll have to Save workspace image before leaving R if you want to use it in a new R
session
```

```
>
```