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Raised conditional level of significance for the
2x2-table when testing the equality of two probabilities.

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Raised conditional level of significance for the 2×2 -table when testing the equality of two probabilities

by R. D. BOSCHLOO *

Summary In this paper it is to be shown that FISHER's non-randomizing exact test for 2×2 -tables, which is a conditional test, can by simple means be changed into an unconditional test using raised levels of significance; not seldom, especially for not too large samples, the level of significance can be doubled. This leads in many cases to a considerable increase of power of the test. A table with raised levels has been prepared up to sample sizes of 50 and a rule of thumb, which can be used if this table is not available, has been developed.

1. Introduction

The usual test for the hypothesis $H_0 : p_1 = p_2$, given the results of two independent sequences of experiments, is the exact test of FISHER (1925) in the 2×2 -table.

p_1	A	C	m
p_2	B	D	n
	R	S	t

Denoting the number of successes in the first sequence by A^{**} and the number of successes in the second sequence by B , the test is based on the conditional distribution of A under the condition $R = r$, where $R = A + B$ and where r is the value actually found for R . The conditional distribution mentioned is, under H_0 , a hypergeometric distribution.

The level of significance used for this non-randomized conditional test is further to be called the "conditional level of significance" and often shortly written as "conditional level". If α is this conditional level then the unconditional level of significance (being the true probability of unjustified rejection of H_0 , in this paper often written as "unconditional level") depends on the common value p of p_1 and p_2 .

This unconditional level is denoted by $\alpha(p)$.

The use of the conditional test derives its justification from the fact that the inequality $\alpha(p) < \alpha$ holds for every value of p . Numerical calculations, however, show that not only for most values of p the value of $\alpha(p)$ is much smaller than α but that even $\alpha_{\max}$, the maximum value of $\alpha(p)$ over all p , is often, especially with small samples, smaller than $\frac{1}{2}\alpha$. We shall call $\alpha_{\max}$ the unconditional size of the test. The small value of the size leads to a regrettable loss of power of the test.

One possible method to overcome this disadvantage is to use randomization in order

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** Capitals refer to random variables.

to make the conditional size equal to α , for every r separately. There are, however, well known objections of practical and fundamental character against randomization of this kind.

Another method was advocated for some time by BARNARD (1945). He abandoned his proposal later after a discussion with FISHER (1945). The idea of BARNARD is to use an unconditional test for H_0 instead of a conditional one. This idea was taken up by GARSIDE and MACK (1967) in a slightly modified form. They give tables for sample sizes up to 15.

The test proposed in the present paper is another modification, more closely linked up with FISHER's original test and suitable for samples of all sizes: tables, with only two entrances for each α , up to samples of size 50 and an approximation for larger samples.

2. The unconditional level of significance of the fisher test

The possible outcomes for the binomially distributed number of successes A in the first sequence of experiments are $a = 0, 1, \dots, m$. Likewise B in the second sequence has the possible outcomes $b = 0, 1, \dots, n$. Each of the possible results ($A = a$,

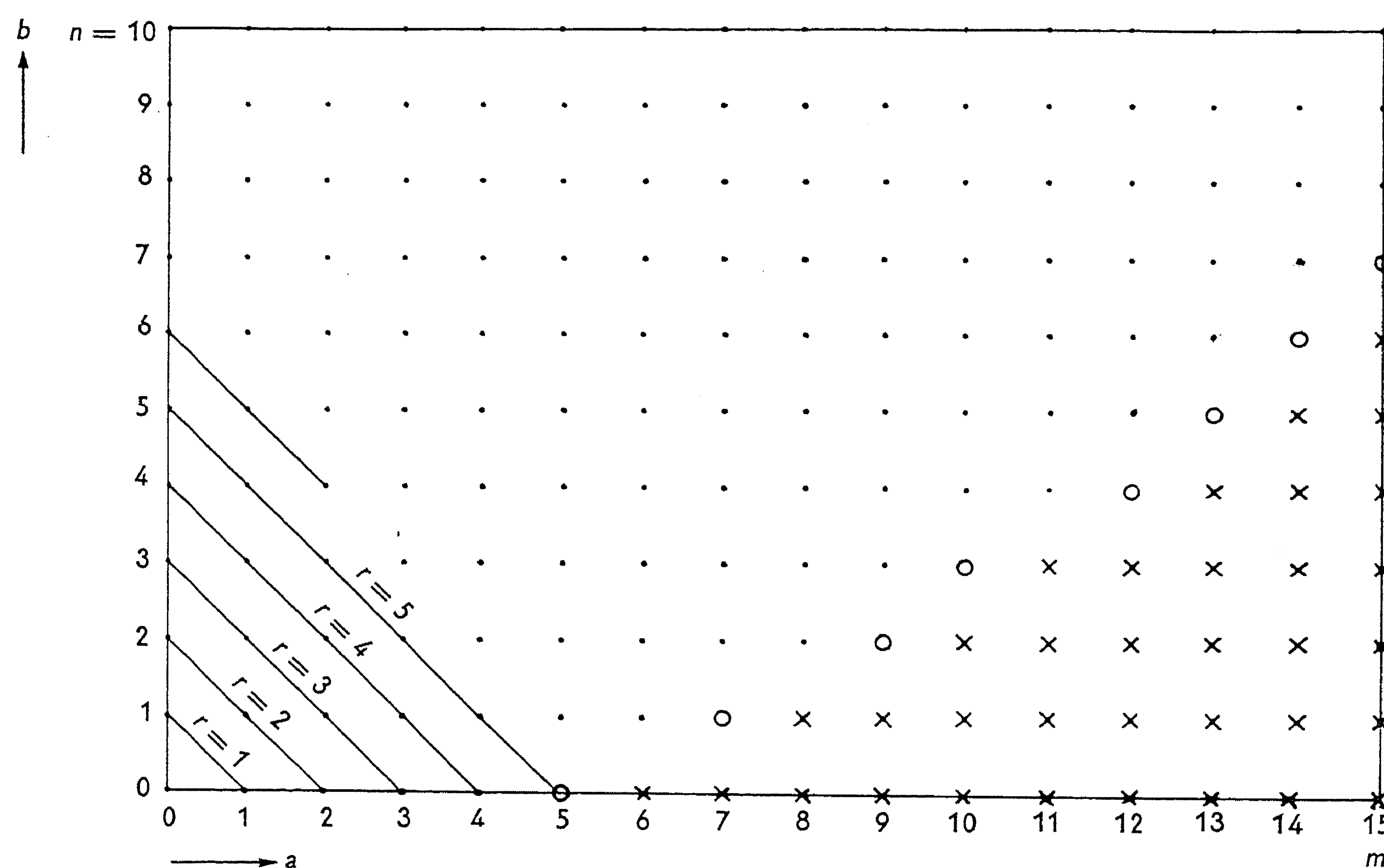


Fig. 1. The sample space of the 2×2 -table with $m = 15$ and $n = 10$. The points marked $\times$ are part of an one sided critical region with conditional level of significance $\alpha = .05$. The points marked $\circ$ are part of an one sided critical region with conditional level of significance $\alpha = .09$.

$B = b$) of the 2×2 -table corresponds with the point (a, b) of the sample space representable by a rectangle as drawn in figure 1.

In figure 1 the sample space of the original FISHER test when $R = r$ consists of the points (a, b) with $a + b = r$ being the points $(a, r - a)$ on the line $a + b = r$.

The critical region K_r in this conditional sample space is to be found in the usual way by means of the hypergeometric distribution. One finds the overall critical region K by taking all regions K_r together.

In figure 1, where $m = 15$, $n = 10$, $\alpha = .05$ and $H_0 : p_1 \leq p_2$, the points marked $\times$ are in the critical region K .

It is interesting to know the true probability, under H_0 , of finding an outcome that corresponds with a point of K . This probability, the unconditional level of significance, is

$$\alpha(p) = P[(A, B) \in K | H_0] = \sum_r \alpha_r \cdot p(r | H_0) \quad (1)$$

where

$$p(r | H_0) = P[R = r | H_0] = \binom{m+n}{r} p^r (1-p)^{m+n-r} \quad (2)$$

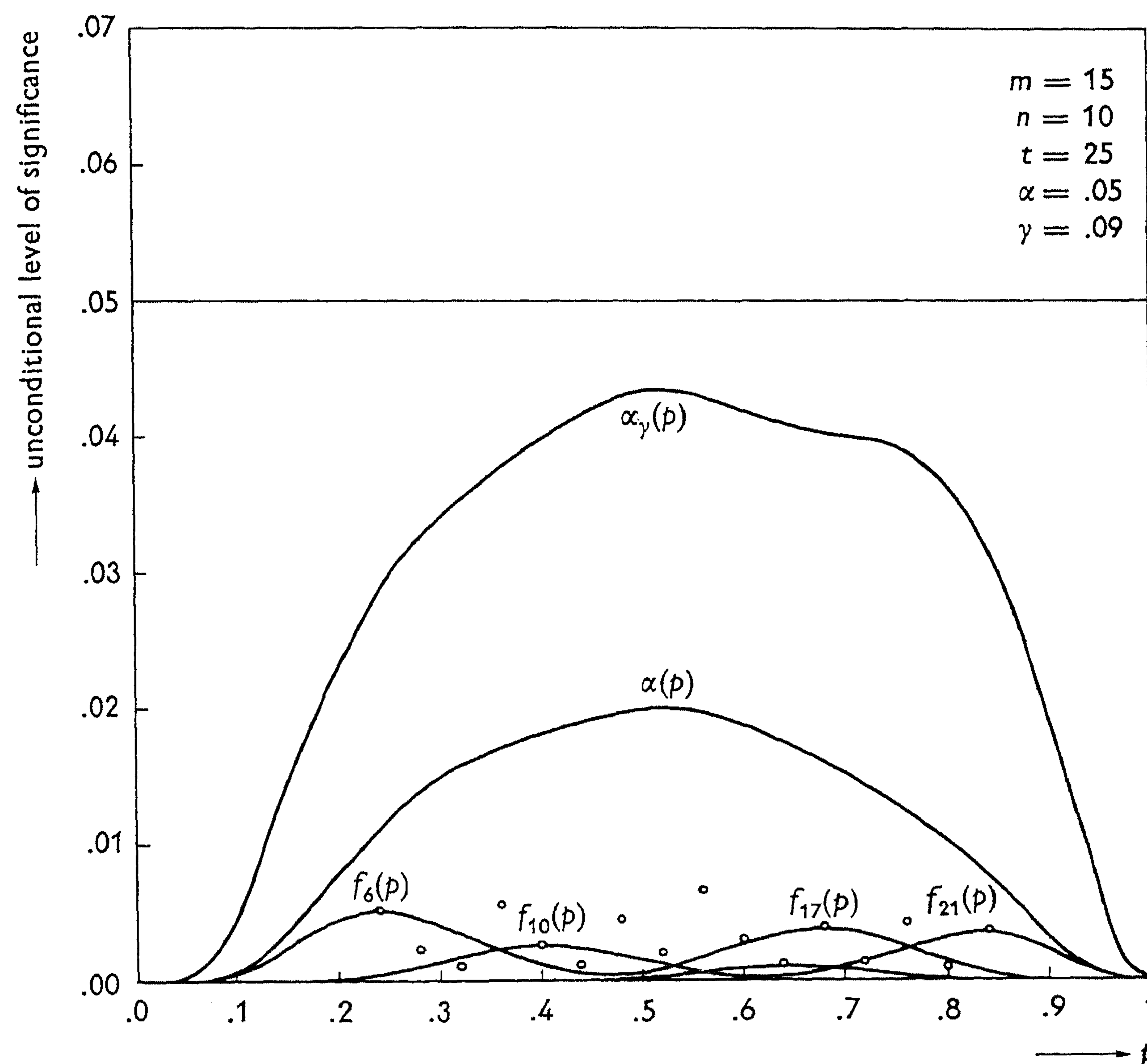


Fig. 2. The unconditional level of significance $\alpha(p) = \sum f_r(p)$ where $f_r(p) = \alpha_r \cdot p(r | H_0)$. $f_r(p)$ has its maximum for $p = r/t$. For all values of r the maximum of $f_r(p)$ is marked with $\times$. For some values of r the function $f_r(p)$ is also drawn. The function $\alpha_\gamma(p)$ is the unconditional level of significance using the raised conditional level of significance γ instead of α .

and where

$$\alpha_r = P[(A, B) \in K_r | R = r, H_0] \quad (3)$$

is the sum of some hypergeometric point probabilities which is usually smaller than α .

In figure 2 this function $\alpha(p)$ and some of the functions $f_r(p) = \alpha_r \cdot p(r|H_0)$ are drawn; m , n and α here have the same values as in figure 1.

It is striking in this diagram that even the maximum $\alpha_{\max}$ of $\alpha(p)$, being the size of the test, remains considerably under the conditional level of significance α ($= .05$) and in this case amounts to about .02.

3. A raised conditional level of significance

The improvement of the test suggested in this paper is based on the following idea:

Seeing that the use of the conditional level α leads to a too small unconditional level $\alpha(p)$, a raised conditional level γ is selected in such a way that the unconditional level $\alpha_\gamma(p)$ does not exceed for any value of p the desired α . Under this condition γ is chosen as high as possible.

In the case of figure 1 and 2 the use of a raised level $\gamma = .09$ is allowed. Using $\gamma = .09$ instead of .05 as a conditional level, the critical region in figure 1 is extended with the points marked $\bigcirc$ and the unconditional level $\alpha_\gamma(p)$ drawn in figure 2 gives a much better approximation of the desired level $\alpha = .05$.

It is stressed once more that the calculations for Fisher's test remain unchanged; only the level of significance used is raised.

In the two sided test the critical region K consists of two separate parts of the sample space lying diametrical with regard to each other. First only one part is taken into account: Suppose the conditional level $\gamma'/2$ corresponding to this part is chosen as high as possible but in such a way that the unconditional level does not exceed $\alpha/2$.

If $\alpha_{\gamma'/2}(p)$ is the unconditional level corresponding to this part of the critical region than $\alpha_{\gamma'/2}(1-p)$ is the unconditional level corresponding to the other part.

Since the maximum of the total unconditional level $\alpha_{\gamma'/2}(p) + \alpha_{\gamma'/2}(1-p)$ can be smaller than twice the maximum of $\alpha_{\gamma'/2}(p)$, it is sometimes possible to find in the two sided case a raised level γ with $\gamma > \gamma'$. This opportunity, sometimes to add in the double sided test an extra increase to the raised conditional level, is utilized.

4. The power of the test

When using raised conditional levels of significance in most cases some points are

added to the critical region K . This then leads to a considerable increase of the power of the test as appears from the following example.

m	n	p_1	p_2	$\alpha = .01$ one sided			$\alpha = .05$ one sided		
				I	II	III	I	II	III
15	15	.3	.1	.0755	.1493	.1488	.2558	.3531	.3739
15	15	.6	.1	.6087	.7394	.7380	.8451	.9189	.9151
15	15	.7	.2	.5268	.6796	.6771	.8066	.8962	.8796
15	15	.8	.2	.7647	.8723	.8635	.9391	.9744	.9660

In column I: the power of FISHER's original test.

In column II: the power of FISHER's test when raised levels of significance are used.

In column III: the power of the randomized FISHER test.

In this example m , n , p_1 , p_2 and α have the same values as in the example given in an editorial note by PEARSON on a paper of BENNETT and HSU (1960), in which it is shown that the exact power is often much smaller than the power computed by means of the approximation formulas given by PATNAIK (1948) and SILLITO (1949). These approximation formulas however seem to be useful for FISHER's test with raised levels of significance.

In general the power of the randomized test is higher than the power of our test. However, as illustrated by column II and III of the above table, this is sometimes the other way around (in the table in all cases but one). To understand this it may be pointed out that the randomized test is only uniformly most powerful amongst the class of unbiased test (see for example TOCHER (1950) or LEHMANN (1959)). FISHER's test with raised levels is just like FISHER's original test, a biased one.

5. Practical use of the test

Three methods for FISHER's test with raised levels are developed.

I. *A table.* Using the Electrologica X-8 computer of the Mathematical Centre, Amsterdam, tables of γ for several values of α have been prepared, for the time being up to sample sizes of 50. This table is to be found at the end of this paper.

For the raised levels γ , which could freely be chosen in small intervals, rounded numbers were selected in such a way that the use of the χ^2 approximation with correction for continuity * and the use of exact hypergeometric probabilities both lead, as much as possible, to the same conclusion about H_0 .

If the use of the χ^2 -approximation with correction for continuity may, for some

* Under the condition $R = r$ and under H_0 the variate

$$\left(\left| A - \frac{m \cdot r}{t} \right| - \frac{1}{2} \right)^2 \times \frac{t^3}{m \cdot n \cdot r \cdot s}$$

has approximately a χ^2 distribution with one degree of freedom.

value(s) of r , lead to discordance with the hypergeometric distribution the raised level γ in the table is marked. For higher values of m and n this occurs frequently but it seems worse than it is in reality, because the discordancies only occur for a small fraction of the possible values of r .

II. *A rule of thumb.* If the outcome of a 2×2 -table corresponds with a point of the sample space that is just outside the conditional critical region K_r of FISHER's original test, one computes the probability p' which would be used in the randomized FISHER test. This probability p' is then compared with $\frac{2}{3}$; one rejects H_0 if $p' \geq \frac{2}{3}$.

The critical region that arises when this rule of thumb is used is almost always situated inside the critical region that arises if the table mentioned in I is used; so the use of this table yields more power.

The value $\frac{2}{3}$ has been found by numerical experimentation; a smaller value sometimes leads to an unconditional level of significance that exceeds α .

As a matter of course the rule of thumb only could be controlled for sample sizes mentioned in I because for other sample sizes the value of γ was not available. On this range for m and n there was no indication that the fitness of the rule of thumb depends on the sample sizes.

KLERK-GROBBEN and PRINS (1954) developed a similar rule of thumb for a problem closely related to our problem: testing the equality of two *small* probabilities in two samples of the same size. They arrive at the rule to reject H_0 if $p' > \frac{1}{2}$. Our more conservative value $\frac{2}{3}$ is valid for all probabilities and for equal and unequal sample sizes.

III. *A computer test.* There exists an ALGOL-60 program that computes for a given outcome of a 2×2 -table the minimum critical region K still containing this outcome. Then the maximum $\alpha_{\max}$ of the unconditional level of significance belonging to this region K is computed and printed. This is an upper bound for the tailprobability and if $\alpha_{\max} \leq \alpha$ then H_0 is to be rejected.

6. Example

A 2×2 -table of the type mentioned above exists of two samples with sample sizes 15 and 10. In each sample one finds 10 failures.

5	10	15
0	10	10
0	20	25

The nullhypothesis $H_0 : p_1 = p_2$ is to be tested onesided, with a level of significance $\alpha = .05$, against the alternative hypothesis $p_1 > p_2$.

In the original test the exact hypergeometric probability

$$P[A \geq 5 | H_0, R = 5] = \binom{15}{5} \binom{10}{0} / \binom{25}{5} = .0565$$

does not give reason to reject H_0 because $.0565 > .05$.

The table with raised unconditional levels of significance, however, gives $\gamma = .09$. So it is allowed, without further calculations, to reject H_0 because $.0565 < .09$.

Referring to this example some remarks can be made.

First it is to be shown that the use of the rule of thumb also leads to rejection of H_0 :

The outcome of 10 failures in each sample is an outcome just outside the conditional critical region K_r of the original FISHER test and in this one sided case $p' = (.05 - 0) / (.0565 - 0) = .88$ thus $p' > \frac{2}{3}$.

This outcome actually found in this 2×2 -table is represented by the point $(a, b) = (5, 0)$ in figure 1 and is one of the eight points added to the critical region by means of the raised level method. All these points except the point $(a, b) = (10, 3)$ can also be found by means of the rule of thumb.

In the two sided test with $\alpha = .05$ the raised level of significance has the value $\gamma = .114$. Since the inequality $.565 < .144/2$ holds, this outcome even gives reason to reject H_0 in the two sided test with $\alpha = .05$. In that case, however, the use of the χ^2 -approximation (probability .63) does not lead to rejection of H_0 . There is a warning against this at the bottom of the table. The use of the rule of thumb ($p' = .44$) does not lead to rejection either.

7. Other types of 2×2 -tables and other conditional tests

An easy way to characterize each of the three best-known types of 2×2 -tables is by means of the number of fixed marginal totals in the 2×2 -table; the total t is left out of consideration.

The type of 2×2 -table of the present paper is then to be called the two-fixed-totals 2×2 -table, for in this type m and n are fixed. It has been shown for this case that FISHER's test may be used with raised levels. Another type is the four-fixed-totals 2×2 -table; all marginal totals m , n , r and s are fixed. This type is obtained if A white balls are found in a sample of size m drawn out of an urn containing r white and s black balls. In tests for this type the use of raised levels is not allowed.

In the test for the third type, the zero-fixed-totals 2×2 -table, where all totals but t are stochastic, it is permitted to use the rule of thumb in the same way as before while also a cautious use of the table with raised levels is allowed as is to be shown hereafter.

In the model corresponding with the zero-fixed-totals 2×2 -table each of the items in a sample of size t has or does not have property V and also has or does not have property W .

The nullhypothesis H_0 to be tested is: V and W are stochastically independent.

Under the condition $M = m$ and under H_0 , the distribution in this 2×2 -table is the same as the distribution in the two-fixed-totals 2×2 -table under H_0 . Seeing that the use of the raised level γ in the last mentioned 2×2 -table leads to $\alpha_{\max}$ as the ultimate level of significance it is obvious that the level of significance in the first mentioned 2×2 -table under the condition $M = m$ also is at most $\alpha_{\max}$. Since this holds for every m it is clear that the overall level of significance does not exceed the chosen level α . So the use of raised levels is allowed in this case too.

The only trouble is that there possibly are two different values of γ to be found for besides the condition $M = m$ also the condition $R = r$ could have been considered; in the zero-fixed-totals 2×2 -table the properties V and W are interchangeable and so are R and M . It is, however, allowed to apply the smallest one of the two values for γ .

There are no problems with the application of the rule of thumb in case of the zero-fixed-totals 2×2 -table, because in the calculations of p' , an interchange of r and m has no influence on the result.

Another approach to this problem would be to apply the process used for the two-fixed-totals 2×2 -table in this paper in a generalized form to the zero-fixed-totals case. This would lead to a table of raised levels γ as a function of t only. The computational work involved is considerable and it is not certain that any further worthwhile increase of power would result. Further research on this point is desirable.

There are other tests based on discrete conditional distributions. These tests also derive their justification from the fact that the unconditional level of significance does not exceed the chosen conditional level α . It is to be expected, however, that in the same way as described above raised conditional levels could be found.

In contrast with the case of the two-fixed-totals 2×2 -table, where the unconditional size depends on the variable p , in other conditional tests the unconditional level often depends on several nuisance parameters. As in the case of the zero-fixed-totals 2×2 -table, the computational work is then increased.

Acknowledgement

I owe many thanks to Prof. J. HEMELRIJK who was a valued and indispensable guide in this research.

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Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
2	1	-	-	-	-	-	-	-	.3
2	2	-	-	-	-	-	-	-	.2
3	1	-	-	-	-	-	-	-	.2
3	2	-	-	-	.1	.2	.1	.2	.10
4	1	-	-	-	-	-	-	.6	.3
4	2	-	-	-	.1	.2	.1	.2	.3
4	3	-	-	.1	.1	.2	.13	.26	.2
4	4	.04	.08	.04	.025	.050	.1	.2	.23
5	1	-	-	-	-	-	-	.6	.2
5	2	-	-	-	.1	.2	.05	.4	.2
5	3	-	.10	.05	.09	.18	.14	.28	.2
5	4	.02	.04	.02	.1	.2	.14	.28	.2
5	5	.01	.02	.01	.05	.10	.09	.18	.24
6	1	-	-	-	-	-	-	.4	.2
6	2	-	-	-	.07	.14	.16	.32	.23
6	3	.03	.06	.03	.06	.2	.2	.4	.2
6	4	.01	.02	.03	.05	.10	.1	.248	.2
6	5	.014'	.028'	.03	.064	.128	.15	.30	.19
6	6	.02	.04	.02	.07	.14	.11	.22	.25
7	1	-	-	-	-	.4	.2	.4	.2
7	2	-	.10	.05	.05	.2	.1	.2	.2
7	3	.02	.04	.01	.05	.16	.1	.2	.2
7	4	.02	.04	.03	.07	.14	.108"	.30	.20
7	5	.02	.04	.04	.06	.12	.1	.2	.2
7	6	.020	.040	.024	.074	.148	.1	.2	.20
7	7	.014	.028	.03	.04	.08	.11	.22	.2
8	1	-	-	-	-	.4	.2	.4	.2
8	2	.01	.08	.04	.1	.2	.1	.42	.21
8	3	.01	.08	.04	.058	.2	.14	.28	.24
8	4	.014	.04	.02	.05	.138	.12	.24	.2
8	5	.01	.02	.03	.07	.14	.11	.22	.184
8	6	.016'	.032'	.02	.06	.12	.1	.2	.17
8	7	.014	.028	.03	.07	.16	.09	.18	.21
8	8	.018	.036	.018	.05	.10	.12	.24	.15
9	1	-	-	-	-	.30	.15	.52	.26
9	2	-	.06	.03	.08	.28	.14	.28	.23
9	3	.005	.06	.03	.07	.14	.11	.28	.2
9	4	.017	.034	.04	.06	.18	.11	.22	.21
9	5	.02	.04	.025	.05	.10	.10	.24	.17
9	6	.009	.028	.03	.07	.14	.11	.22	.2
9	7	.016	.040'	.023	.066	.140'	.1	.2	.18
9	8	.013'	.026'	.034	.0443	.10	.10	.20	.21
9	9	.01	.02	.02	.06	.12	.12	.24	.17
10	1	-	-	-	-	.28	.14	.46	.23
10	2	.03	.06	.03	.07	.24	.12	.4	.2
10	3	.02	.04	.02	.05	.18	.11	.22	.20
10	4	.013	.06	.03	.05	.136	.11	.22	.24
10	5	.01	.036	.03	.06	.16	.098	.26	.17
10	6	.02	.04	.026	.059	.118'	.117"	.234"	.2147"

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
10	7	.014 '	.032	.03	.056	.112	.10	.20	.160
10	8	.02	.04	.027	.06	.12	.08	.2	.1833
10	9	.014	.034	.021	.053	.1090'	.10	.20	.215
10	10	.0114	.0228	.024	.06	.12	.087	.174	.18
11	1	-	-	-	-	.2	.1	.4	.2
11	2	.02	.04	.02	.05	.2	.1	.34	.22
11	3	.02	.06 "	.03 "	.07	.190	.12	.24	.2
11	4	.02	.04	.029	.07	.14	.12	.24	.2
11	5	.01	.04	.034	.059 '	.14	.12	.24	.2
11	6	.013	.0346'	.024	.06	.12	.10	.24	.18
11	7	.012 '	.024 '	.02	.045	.110 '	.111	.222	.18
11	8	.012	.024	.023	.05	.10	.1	.2	.173
11	9	.0122'	.0244'	.029	.05	.10	.09	.18	.17
11	10	.016	.032	.0225	.0562'	.1124'	.11	.22	.217
11	11	.014	.028	.03	.042	.084	.096	.192	.17
12	1	-	-	-	-	.2	.1	.4	.2
12	2	.02	.04	.02	.09	.26	.13	.4	.2
12	3	.01	.050 "	.025 "	.06	.16 "	.1	.28	.23
12	4	.01	.044	.022	.055	.132	.117 "	.234 "	.19
12	5	.0115	.036	.025	.056	.148	.1	.2	.196
12	6	.012 '	.034	.0219	.06	.12	.11	.236	.19
12	7	.017 '	.034 '	.025	.05	.10	.11	.250	.2
12	8	.0153	.0306	.024 '	.053 '	.106 '	.105	.22	.17
12	9	.013	.026	.023	.05	.10	.079 '	.2	.18
12	10	.014 '	.028 '	.02	.047	.094	.09	.18	.17
12	11	.010 '	.020 '	.0257 '	.058 '	.116 '	.11	.22	.152
12	12	.011	.022	.0194 '	.048 '	.096 '	.10	.20	.17
13	1	-	-	-	-	.2	.1	.4	.2
13	2	.014	.08	.04	.07	.22	.11	.34	.23
13	3	.01	.06	.03	.07 "	.18	.12	.28	.20
13	4	.017	.052	.026	.07	.14	.11	.26	.21
13	5	.019	.038	.026	.062 "	.16	.094 '	.24	.175
13	6	.013	.026	.023	.06	.12	.093	.20	.2
13	7	.011 '	.022 '	.028	.055	.110	.1014	.208	.1751
13	8	.013	.0286	.024	.044	.1268'	.1	.234	.18
13	9	.015	.030	.02304'	.05	.106 '	.099 '	.212	.16
13	10	.012 '	.024 '	.0257 '	.05	.10	.09	.18	.18
13	11	.012	.0336	.021 '	.053	.106	.09	.18	.17
13	12	.0126'	.0252'	.023	.062	.124	.0818	.1636	.16
13	13	.013	.026	.0234	.053	.106	.09	.18	.17
14	1	-	-	-	-	.2	.1	.48	.24
14	2	.01	.06	.03	.06	.2	.1	.30	.2
14	3	.02 "	.050	.025	.052	.14	.1	.244	.21
14	4	.013	.04	.027	.06	.12	.09	.24	.204
14	5	.014	.04	.03	.06	.138 '	.116	.232	.2
14	6	.0120'	.0356	.032	.054	.132	.1	.2	.19
14	7	.016 '	.032 '	.023	.06	.12	.099 "	.22	.19
14	8	.010 '	.022 '	.026	.05	.10	.093	.186	.17
14	9	.016 '	.032 '	.02	.05	.116	.10	.222	.17
14	10	.016	.032	.023	.049	.108	.095	.190	.166

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
14	11	.013	.0288	.027	.043	.10	.097	.194	.17
14	12	.0090	.0242	.023	.0525	.114	.09	.18	.17
14	13	.0129	.030	.024	.041	.082	.088	.176	.165
14	14	.0104	.0208	.022	.05	.10	.09	.18	.18
15	1	-	-	-	.1	.2	.1	.46	.23
15	2	.01	.06	.03	.06	.26	.13	.36	.22
15	3	.016	.06	.03	.06	.18	.13	.26	.22
15	4	.010	.044	.022	.06	.16	.11	.24	.2
15	5	.011	.030	.023	.055	.110	.11	.22	.20
15	6	.0115	.032	.025	.0551	.1102	.10	.20	.183
15	7	.011	.030	.022	.056	.112	.104	.22	.17
15	8	.015	.030	.023	.057	.12	.097	.208	.17
15	9	.012	.024	.0244	.047	.12	.10	.20	.18
15	10	.011	.022	.02	.0526	.114	.09	.18	.154
15	11	.0107	.0214	.024	.048	.108	.083	.184	.167
15	12	.012	.030	.0192	.047	.094	.1019	.2038	.17
15	13	.011	.022	.025	.05	.10	.10	.20	.141
15	14	.012	.0286	.0194	.0459	.0918	.09	.188	.16
15	15	.012	.024	.02505	.054	.108	.10	.20	.134
16	1	-	-	-	.1	.2	.1	.42	.21
16	2	.008	.048	.024	.05	.24	.12	.32	.2
16	3	.014	.06	.03	.07	.14	.11	.22	.2
16	4	.014	.036	.03	.05	.128	.13	.26	.21
16	5	.02	.04	.023	.05	.1262	.11	.24	.1828
16	6	.012	.04	.02304	.05	.132	.097	.230	.173
16	7	.011	.026	.0243	.05	.10	.091	.22	.17
16	8	.01	.026	.024	.054	.108	.093	.186	.18
16	9	.011	.028	.024	.0529	.12	.0976	.20	.174
16	10	.0133	.0266	.0177	.049	.104	.10	.20	.17
16	11	.0129	.0258	.022	.05	.110	.09	.202	.168
16	12	.0114	.0228	.023	.053	.106	.089	.1854	.163
16	13	.013	.026	.021	.05	.10	.09	.20	.17
16	14	.012	.02614	.024	.05	.10	.0775	.16	.147
16	15	.0091	.0182	.022	.048	.1002	.093	.196	.16
16	16	.010	.020	.0157	.0376	.0752	.076	.152	.144
17	1	-	-	-	.08	.28	.14	.4	.2
17	2	.007	.04	.02	.07	.22	.11	.416	.208
17	3	.01	.04	.02	.06	.20	.12	.282	.20
17	4	.014	.050	.025	.065	.162	.1	.26	.212
17	5	.014	.028	.022	.0489	.12	.103	.22	.19
17	6	.015	.030	.026	.058	.1188	.11	.22	.19
17	7	.011	.036	.01947	.058	.1188	.11	.22	.17
17	8	.014	.028	.0205	.05	.124	.10	.22	.189
17	9	.0118	.024	.023	.0483	.0966	.10	.226	.17
17	10	.013	.028	.023	.044	.106	.0897	.198	.161
17	11	.013	.026	.0216	.051	.112	.09	.18	.16
17	12	.0106	.024	.024	.053	.1070	.078	.196	.164
17	13	.011	.024	.017	.044	.092	.092	.184	.16
17	14	.01064	.02128	.023	.046	.092	.09	.20	.17
17	15	.013	.026	.0171	.0405	.0810	.0829	.1658	.154

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
17	16	.0108	.0216	.0214	.049	.104	.096	.192	.16
17	17	.0125	.0250	.0187	.041	.082	.081	.162	.15
18	1	.006	.036	.018	.07	.26	.13	.4	.2
18	2	.0147	.054	.027	.06	.26	.13	.34	.21
18	3				.067	.170	.11	.22	.20
18	4	.012	.050	.025	.06	.12	.11	.272	.205
18	5	.014	.044	.0279	.05	.116	.10	.24	.204
18	6	.013	.026	.025	.063	.126	.10	.230	.18
18	7	.014	.028	.025	.06	.12	.09	.206	.180
18	8	.01225	.028	.0214	.06	.12	.09	.2014	.169
18	9	.013	.026	.021	.047	.110	.096	.208	.168
18	10	.0111	.0222	.022	.053	.106	.094	.20	.17
18	11	.014	.028	.018	.048	.102	.092	.184	.17
18	12	.009	.026	.0204	.05	.112	.09	.198	.1618
18	13	.011	.022	.026	.051	.106	.085	.18	.169
18	14	.011	.026	.020	.048	.096	.092	.184	.162
18	15	.0111	.0222	.019	.047	.094	.09	.18	.17
18	16	.0119	.028	.0196	.0445	.0890	.0871	.1742	.156
18	17	.011	.024	.0227	.051	.102	.093	.20	.16
18	18	.009	.018	.0204	.04608	.09216	.085	.170	.155
19	1	.016	.032	.016	.07	.24	.12	.36	.18
19	2	.008	.046	.023	.06	.22	.11	.40	.20
19	3	.0147	.044	.022	.061	.18	.11	.280	.2
19	4	.014	.0370	.023	.06	.14	.11	.22	.192
19	5					.12	.11	.22	.185
19	6	.014	.032	.024	.055	.122	.097	.194	.17
19	7	.012	.032	.0236	.052	.118	.097	.194	.170
19	8	.013	.026	.024	.050	.110	.089	.196	.17
19	9	.0114	.0256	.0242	.0513	.1026	.088	.176	.192
19	10	.010	.0286	.02	.055	.110	.09	.18	.18
19	11	.0104	.0208	.021	.046	.10	.092	.20	.164
19	12	.013	.026	.0218	.0498	.0996	.0861	.188	.16
19	13	.0105	.0210	.0200	.05	.10	.08	.16	.16
19	14	.012	.024	.0168	.0414	.100	.091	.182	.16
19	15	.0097	.0194	.0218	.050	.100	.09	.18	.1593
19	16	.012	.024	.02	.05	.10	.0747	.18	.14
19	17	.0093	.01950	.021	.0469	.096	.086	.180	.16
19	18	.011	.023350	.0156	.048	.1010	.0701	.190	.16
19	19	.0099	.0198	.021	.045	.090	.088	.176	.15
20	1	-	-	-	.06	.24	.12	.44	.22
20	2	.014	.06	.03	.05	.20	.10	.36	.22
20	3	.014	.040	.020	.05	.16	.12	.24	.208
20	4	.012	.050	.025	.052	.128	.10	.24	.2
20	5	.014	.038	.024	.06	.12	.10	.230	.18
20	6	.011	.0350	.023	.052	.1068	.10	.230	.18
20	7	.0094	.030	.0237	.049	.136	.09	.20	.20
20	8	.010	.032	.0222	.052	.12	.104	.208	.18
20	9	.0114	.0228	.0224	.051	.102	.10	.20	.17
20	10	.0113	.0234	.023	.0448	.0896	.097	.2072	.17
20	11	.011	.0270	.024	.0501	.1002	.0857	.1714	.16

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
20	12	.0114 '	.0228 '	.01849"	.046 '	.112	.09	.18	.162
20	13	.0091 "	.024 '	.021 '	.047 '	.100	.09	.18	.157 "
20	14	.011 '	.022 '	.0202 '	.05	.10	.080	.174	.15
20	15	.012 '	.024 '	.0191 '	.043	.098	.08	.180	.16
20	16	.01056'	.02112'	.01993'	.046	.102	.09	.1906'	.157 "
20	17	.013	.026	.0178 '	.0399 '	.084	.079	.160	.1469
20	18	.0106 '	.0212 '	.0204 '	.046	.0994	.087	.18	.154
20	19	.0113	.0240 '	.018 '	.0388 '	.0776 '	.0754'	.1508'	.1332
20	20	.011	.022	.0216	.047	.094	.08	.16	.155
21	1	-	-	-	.06	.22	.11	.42	.21
21	2	.012	.052	.026	.063	.20	.12	.40	.20
21	3	.012	.06 "	.03 "	.060 "	.20	.12	.26	.21
21	4	.0101 "	.044	.03 "	.055 "	.14	.112	.224	.20
21	5	.01435"	.032	.025 "	.0554	.128	.096 '	.22	.20 '
21	6	.014	.032	.0243 "	.053 "	.130	.105	.210	.185
21	7	.012	.030	.020 "	.057	.1204	.092 '	.184 '	.16
21	8	.011 "	.022 "	.02 '	.054 '	.108	.10	.20	.1795
21	9	.0118	.0236 '	.0206 "	.052	.104	.093 '	.196	.155
21	10	.015 "	.030 "	.01930"	.056	.112	.095 "	.196	.153
21	11	.0106 "	.0228 '	.020	.046	.106	.088	.204	.1626"
21	12	.0123 "	.0254	.024	.047 "	.094 "	.093	.186	.165
21	13	.0115	.0230 '	.0205	.049	.106	.085	.170	.16
21	14	.0105	.0210	.0208	.0446	.098	.086	.184	.16
21	15	.012	.024	.0203	.0393 "	.090	.085	.1752'	.168
21	16	.0091	.0194	.019	.0468	.096	.0866	.176	.15
21	17	.01131'	.0228 '	.0199	.0469	.0938	.09	.18	.154
21	18	.0086	.020	.0192	.0425	.0850	.083	.166	.147
21	19	.0113	.0236	.0210	.047	.102	.08	.184	.154
21	20	.00908'	.01816'	.0197	.0424	.0848	.0786	.160	.139
21	21	.0102	.0204	.02	.049	.098	.085	.170	.16
22	1	-	-	-	.06	.2	.1	.4	.2
22	2	.02 "	.046	.023	.06	.22	.11	.38	.19
22	3	.011	.054 "	.027 "	.06	.186	.11	.244	.21
22	4	.0143 "	.052 "	.026 "	.06	.12	.10	.22	.21
22	5	.014	.04 "	.026 "	.055 "	.128	.10	.208	.187 "
22	6	.011	.042 "	.0215 "	.053	.106	.094	.22	.193 "
22	7	.013	.026	.024	.050	.100	.09	.18	.18
22	8	.0132 "	.0278 "	.023	.0547 "	.1094 "	.103 "	.210	.17
22	9	.0134	.0268	.025 "	.0498	.0996	.087	.208	.17
22	10	.0113	.028	.024	.048	.102	.0835'	.172 "	.17
22	11	.013	.026	.0234	.050	.1012	.086	.172	.17
22	12	.0104 "	.0208 "	.0196	.0551	.1102	.09	.186	.16
22	13	.012	.024	.017	.042 "	.1004	.085	.18	.16
22	14	.0091 "	.022	.022	.048	.1022	.091	.1834'	.17
22	15	.010	.020	.0204	.048	.096	.077	.176	.16
22	16	.0100	.024	.0185	.0435	.094	.085	.170	.161
22	17	.01015'	.02030'	.020	.048	.096	.086	.172	.15
22	18	.00997'	.024	.0159	.047	.094	.072	.18	.1351"
22	19	.0099	.0198	.020	.04475	.08950	.084	.168	.15
22	20	.0110	.024	.01548'	.048	.098	.0882'	.180	.155

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
22	21	.0097 '	.0204 '	.020 '	.043	.088	.0822	.168	.144
22	22	.0107 '	.0214 '	.0166 '	.051	.102	.09267 '	.18534'	.16
23	1	.015 "	.042 "	.021	.05	.2	.1	.38	.19
23	2	.016 "	.056	.028	.054	.20	.10	.356	.2
23	3				.06	.14	.118	.26	.19
23	4	.015 "	.044 "	.022 "	.063 "	.14	.12	.24	.19
23	5	.014 "	.034 "	.022 "	.056	.1238	.11	.240 '	.2071
23	6	.01397"	.02794"	.028 "	.05	.134	.09	.22	.180 '
23	7	.011 '	.030 "	.025 "	.058 "	.120 '	.098	.196	.18
23	8	.0122 "	.0274 '	.023 "	.050 "	.110 "	.087 '	.174 '	.171
23	9	.0115 "	.0252 "	.022 "	.044 "	.10 '	.089	.20	.17
23	10	.0115 "	.0238 '	.0217 "	.048	.1154 '	.099	.20136'	.16
23	11	.010 '	.0248 '	.021 '	.043	.094 '	.09	.192 "	.162
23	12	.0117 "	.02356"	.023 '	.0473	.0946	.09	.188	.164
23	13	.0094 '	.0196 '	.021 '	.0467 "	.096 '	.087 '	.174 '	.17
23	14	.0112 '	.0224 '	.0189	.0469 '	.0938 '	.09	.18	.1612
23	15	.0103 '	.0212 '	.020 '	.046	.092	.086 '	.174 '	.156
23	16	.0101 '	.0202 '	.020 '	.047	.094	.081	.1696	.1581"
23	17	.0085 '	.02046'	.020 '	.0469	.096	.0824 '	.1648 '	.156
23	18	.010	.0212 '	.020	.0492 '	.0984 '	.084	.172 '	.15
23	19	.0103 '	.0206 '	.018	.0391 '	.0952	.076	.162 '	.1412
23	20	.0104 '	.0208 '	.022	.046	.092	.082	.172	.152
23	21	.0078 '	.022 '	.0173 '	.0365 '	.0974 '	.06921 '	.178 '	.155
23	22	.0103 '	.0206 '	.020 '	.045	.0932	.0848	.1708	.144
23	23	.0086 '	.0172 '	.0178 '	.03787	.07574	.069	.138	.16
24	1	.014 "	.0370	.0185	.05	.2	.1	.38	.19
24	2	.014 "	.0506	.0253	.05	.20	.10	.36	.18
24	3	.013 "	.056	.028	.06	.18	.113 "	.24	.20
24	4	.012 "	.036 "	.023 "	.055 "	.12	.10	.232	.194 '
24	5				.06	.1372	.105	.210	.19
24	6	.014 "	.028 "	.021 '	.056	.112	.10	.228	.174
24	7	.0123 "	.0246 "	.0218 "	.054	.108	.102	.204	.174
24	8	.0114 "	.0236 '	.023 "	.048 "	.096 "	.102	.2070 "	.17
24	9	.00916'	.0250 "	.0203 "	.0527	.112 '	.10	.20	.178 "
24	10	.00963'	.022 '	.0195 "	.0503	.112	.095	.190	.1544
24	11	.0104 '	.024 '	.0196 "	.053 '	.106 '	.089027"	.186 "	.18
24	12	.0102 "	.0228 '	.021 "	.053	.106	.09	.188	.17
24	13	.0114 '	.0228 '	.021 "	.041 "	.082 "	.093	.186	.156
24	14	.012 '	.024 '	.01868"	.049 "	.098 "	.080	.172 '	.16
24	15	.0087 '	.0212 '	.0194 '	.046	.104	.084	.168	.154
24	16	.0111 '	.0222 '	.0202 '	.047 '	.0958 "	.082	.172	.156
24	17	.0101 '	.0202 '	.0174 '	.041	.082	.081	.162	.155
24	18	.01004'	.0202 '	.020 '	.044	.0952	.080	.170	.156
24	19	.0103	.022 '	.0202	.049	.098	.083	.1712	.157
24	20	.00911'	.020	.018	.041	.086	.080	.1646	.1454
24	21	.011 '	.0230 '	.01997'	.0436 '	.094	.0837	.174	.153
24	22	.00887'	.01774'	.0188 '	.0395	.0796	.0737	.1474	.155
24	23	.0104 '	.022 '	.0202 '	.0447	.092	.082	.174	.147
24	24	.0093 '	.0186 '	.019	.0407	.0814	.073	.146	.15
25	1	-	-	-	.05	.18	.09	.36	.18

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :								
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10	
25	2	.01	"	.04	"	.02	"	.046		
25	3	.012	"	.056		.028		.06		
25	4	.014	"	.048		.024		.065		
25	5	.013	"	.040	"	.0225	"	.061	"	
25	6	.012	"	.0332		.0255	"	.061		
25	7	.011	"	.028		.0256	"	.048		
25	8	.0148	"	.0296	"	.0202	"	.055	"	
25	9	.013	"	.0284	"	.02339	"	.049	"	
25	10	.011	"	.026	"	.02	"	.048	"	
25	11	.010	"	.026	"	.022	"	.0483	"	
25	12	.012	"	.024	"	.021	"	.048	"	
25	13	.010	"	.020	"	.01906	"	.048	"	
25	14	.0109	"	.0226	"	.019	"	.0442	"	
25	15	.0126	"	.0260	"	.018	"	.04586	"	
25	16	.0101	"	.0212	"	.020	"	.045	"	
25	17	.0106	"	.0212	"	.019	"	.046	"	
25	18	.00819	"	.0204	"	.0194	"	.04424	"	
25	19	.0102	"	.02106	"	.020	"	.0454	"	
25	20	.0105	"	.0210	"	.0163	"	.049	"	
25	21	.0101	"	.0202	"	.0193	"	.044	"	
25	22	.0104	"	.024	"	.0153	"	.0443	"	
25	23	.0098	"	.0196	"	.01935	"	.042	"	
25	24	.0109	"	.0218	"	.01565	"	.0436	"	
25	25	.0103	"	.0206	"	.0188	"	.041	"	
26	1	-	-	-	-	.04	-	.18	-	
26	2	.01	"	.054		.027	"	.06	"	
26	3	.010	"	.050		.025		.05		
26	4	.013	"	.04	"	.029	"	.06	"	
26	5	.015	"	.0348	"	.027	"	.053	"	
26	6	.012	"	.032	"	.022	"	.053	"	
26	7	.013	"	.026	"	.0230	"	.0514	"	
26	8	.0115	"	.0230	"	.020	"	.051	"	
26	9	.0112	"	.0224	"	.022	"	.04868	"	
26	10	.0112	"	.0224	"	.023	"	.046	"	
26	11	.012	"	.024	"	.021	"	.042	"	
26	12	.009	"	.0228	"	.0205	"	.0416	"	
26	13	.010	"	.026	"	.021	"	.043	"	
26	14	.0092	"	.0184	"	.0207	"	.0478	"	
26	15	.0102	"	.0218	"	.0188	"	.047	"	
26	16	.009	"	.0238	"	.01967	"	.04275	"	
26	17	.0102	"	.0204	"	.019	"	.0461	"	
26	18	.0107	"	.0214	"	.0166	"	.03897	"	
26	19	.0095	"	.0194	"	.019	"	.044	"	
26	20	.0104	"	.0208	"	.02006	"	.0456	"	
26	21	.00826	"	.02054	"	.018	"	.0389	"	
26	22	.0102	"	.0204	"	.0205	"	.0426	"	
26	23	.0079	"	.02210	"	.017	"	.0455	"	
26	24	.0099	"	.0212	"	.0192	"	.043016	"	
26	25	.00823	"	.01646	"	.01716	"	.0452	"	
26	26	.0097	"	.0194	"	.0196	"	.043	"	

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
27	1	-	-	-	.04	.16	.08	.42	.21
27	2	.01 "	.04934	.02467	.056 "	.20	.10	.34	.17
27	3	.015 "	.046 "	.023 "	.06 "	.16	.11	.26	.197 "
27	4	.014 "	.052 "	.026 "	.0623 "	.146	.104 "	.24	.20
27	5	.01165 "	.0410	.023 "	.0565 "	.14	.103 "	.22	.18
27	6	.012 "	.032 "	.0246 "	.05336 "	.12	.105	.210	.185 '
27	7	.0136 "	.028 "	.021 "	.055 "	.12 "	.0896 '	.22	.17
27	8	.014 "	.0310 "	.022 "	.05 "	.10 "	.096 '	.192 '	.16
27	9	.012 "	.0276 "	.022 "	.0463 "	.116 "	.087 "	.174 "	.166
27	10	.0113 "	.028 "	.022 "	.043 '	.106	.095	.190	.162
27	11	.0109 "	.0218 "	.0194 "	.048 '	.096 '	.0868 '	.1764 "	.166
27	12	.0104 '	.0208 '	.0198 '	.050	.100	.0866 "	.1786	.17
27	13	.0096 "	.0232 '	.020 "	.050 '	.1050 '	.087	.174	.167
27	14	.0102 '	.022 "	.0204 "	.050	.100	.0909	.1818	.16
27	15	.0107 '	.0226 "	.021 '	.0435 "	.0870 "	.087 '	.192 '	.152
27	16	.0102 '	.0204 '	.0187 '	.04865 "	.09730 "	.082 '	.164 '	.155
27	17	.0098 '	.0224	.019	.045 '	.090	.086	.172	.151
27	18	.0098 '	.02004	.018	.0448	.09056	.07674	.158	.148
27	19	.010	.0210	.0183	.04196 "	.0872	.085 "	.174	.15
27	20	.0105	.0210	.0198	.044	.088	.08	.170	.15
27	21	.0104 '	.0208 '	.015	.045	.0922	.08	.16	.150
27	22	.0093	.0190	.019	.0416	.084	.077	.1588	.141
27	23	.0107	.022	.018	.043	.086	.0807	.1614	.151
27	24	.00902	.01804	.01753	.0375	.086	.0685	.16	.15
27	25	.0102	.020864	.020	.043	.094	.08053	.166	.139
27	26	.0092	.0184	.0184	.0369	.0738	.084	.1746	.147
27	27	.010	.020	.019	.041	.082	.077	.154	.136
28	1	-	-	-	.04	.24	.12	.40	.20
28	2	.02 "	.06 "	.03 "	.05 "	.22	.11	.40	.20
28	3	.014 "	.04	.02	.05 "	.20	.11	.244	.19
28	4	.014 "	.046 "	.023 "	.06 "	.12 "	.1054 "	.26	.18
28	5	.013 "	.034 "	.028 "	.053 "	.12	.104	.230	.19
28	6	.0123 "	.0274 "	.028 "	.05 "	.12	.09	.22	.174
28	7	.0118 "	.026 "	.022	.0516 "	.1032 "	.099	.198	.1765 "
28	8	.012 "	.024 "	.0235 "	.053 "	.112 "	.090 "	.208	.170
28	9	.011 "	.024	.0193 "	.048 "	.1012 "	.094	.202	.17
28	10	.0095 "	.0236 "	.019 "	.046 "	.092 "	.095	.190	.167
28	11	.0094	.0188	.023	.047	.096	.087	.18	.174
28	12	.0102	.0204	.0206	.0471	.0952	.0781	.18	.163
28	13	.00916	.024	.020	.046	.092	.087	.186	.156
28	14	.0094	.02024	.0182	.046	.0952	.07703	.15406	.157
28	15	.00976	.0224	.0192	.0398	.098	.0842	.1684	.1641 "
28	16	.0105	.0210	.0187	.045	.0990	.086	.178	.154
28	17	.0090	.0198	.0173	.043	.0926	.083	.176	.15
28	18	.0109	.0218	.0196	.043	.094	.08	.16	.152
28	19	.0094	.020	.0159	.0376	.092	.079	.166	.15
28	20	.00907	.0206	.0193	.0427	.0900	.08	.16	.146
28	21	.01023	.02108	.0196	.043	.086	.08	.168	.15
28	22	.0096	.0192	.0171	.045	.090	.0691	.1726	.15
28	23	.010	.02052	.018	.0436	.08766	.080	.1648	.145

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
28	24	.0099 '	.022 '	.01521'	.0444 '	.0888 '	.0818 '	.1636 '	.1454
28	25	.0094 '	.0188 '	.0186 '	.0402 '	.0804 '	.0719 '	.156	.15
28	26	.0105 '	.0218 '	.0148 '	.0426 '	.090	.0806 '	.170	.143
28	27	.0093 '	.0190 '	.0184	.0391	.0788 '	.069	.138	.148
28	28	.00769'	.01538'	.0156 '	.043	.086	.08	.16	.14
29	1	.016 "	.06 "	.03 "	.036	.24	.12	.38	.19
29	2	.012 "	.054 "	.027 "	.048 "	.22	.11	.378 '	.189 '
29	3	.013 "	.054 "	.027 "	.07	.18 "	.10	.24	.21 '
29	4	.013 "	.054 "	.027 "	.0623 "	.148	.11	.22	.191 '
29	5	.014 "	.0390	.024 "	.056 '	.128	.096 '	.22	.20
29	6	.0156 "	.0328 "	.026 "	.055	.114	.10	.20	.19
29	7	.01049'	.0276 "	.023 "	.048 "	.12	.1065 '	.2130 '	.175
29	8	.0129 "	.0264 "	.0212 "	.051 "	.102 "	.093	.186	.16
29	9	.0104 '	.028 '	.020 "	.055	.110	.091 '	.182 '	.1722
29	10	.012 "	.0276 "	.022 '	.051 "	.102 "	.097 "	.20	.1565'
29	11	.012 "	.024 "	.019 '	.0470 "	.096	.094	.188	.17
29	12	.0118 '	.0236 '	.0204 "	.0424 "	.102	.0868 '	.180 '	.159
29	13	.0108 '	.024 '	.0214 "	.0461 "	.104	.087 "	.174 "	.17
29	14	.0096 "	.0226 '	.0195 '	.0408 '	.092	.0884	.1768	.16
29	15	.00896'	.01792'	.0216	.0441 "	.0882 "	.087 '	.188	.1452
29	16	.010 '	.020 '	.01835"	.0447 "	.0938 '	.076 '	.1816 '	.155
29	17	.010 '	.0212 '	.0199 "	.046	.092	.081	.162	.153
29	18	.00915"	.0192 '	.019 '	.043 '	.086 '	.086	.172	.154
29	19	.0095 '	.0210 '	.0195 '	.042 '	.090	.075 "	.16	.155
29	20	.0092 '	.0204 '	.0175 '	.0404 '	.088	.0804 '	.166	.155
29	21	.0098 '	.0204 '	.0187 '	.043 '	.086 '	.08	.16	.154
29	22	.0102 '	.0210 '	.0193 '	.04302'	.08604'	.082	.164	.15
29	23	.00865'	.01730'	.0175 '	.0384	.084	.0733 "	.164	.15
29	24	.0099 '	.0198 '	.019	.042 '	.084	.0816 '	.1632 '	.1433
29	25	.00794'	.020 '	.01678'	.0455	.0910	.080	.164	.1445
29	26	.00960'	.020 '	.0182 '	.0407 '	.0814 '	.0748 '	.1496 '	.1476
29	27	.0080 '	.0160 '	.0163 '	.043	.0958 '	.079	.170	.141
29	28	.0101	.02050'	.019	.0403	.0826 '	.072	.1452 '	.15
29	29	.0085 '	.0170 '	.0171	.044	.088	.08	.16	.14
30	1	-	-	-	.034	.22	.11	.36	.18
30	2	.015 "	.050 "	.025 "	.063	.20	.10	.364 "	.19 '
30	3	.011 "	.048 "	.024 "	.06	.192	.12	.24	.19 '
30	4	.013 "	.048 "	.024 "	.057 "	.12	.11	.24	.20
30	5	.0137 "	.0346 "	.021 "	.057	.114	.11	.22	.18
30	6	.0142 "	.0294 "	.024 "	.052	.1318	.10	.22	.17 '
30	7	.012 "	.0330	.025 "	.053	.106	.098 "	.202	.17
30	8	.011 "	.026	.024 "	.0484 "	.12	.098	.196	.17
30	9	.011	.022	.023 "	.0487	.1052	.097	.194	.155
30	10	.0115 "	.0244 "	.020	.0482 "	.0964 "	.0893 "	.190	.17
30	11	.012 "	.024 "	.0181	.0449	.0898	.092	.184	.1607
30	12	.0106 "	.0236 "	.0194 "	.047	.1028	.08835"	.18	.17
30	13	.0110 "	.0224	.0192 "	.047	.094	.0865 "	.1730 "	.163
30	14	.0106 '	.0212 '	.0203 "	.0465	.100	.081	.162	.16
30	15	.01001"	.0226 "	.020 "	.046	.098	.08296"	.16592"	.156
30	16	.0105 "	.0228	.019	.042 "	.096	.084	.1730	.16

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

Unconditional level of significance (one or two sided) :

Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
30	17	.0096 '	.0192 '	.0188 "	.0446	.0898 '	.088	.176	.149
30	18	.0090 "	.0208 '	.0196 "	.045	.0974 '	.0814 '	.1670 '	.15
30	19	.0095 '	.0190 '	.0196	.0427 '	.0868 '	.08	.16	.148
30	20	.0100 '	.0204 '	.01575"	.046	.092	.0795 "	.170	.16
30	21	.00868"	.0176 '	.0189 '	.0430	.0876	.0803	.166	.15
30	22	.009	.0200 '	.0187 '	.04248'	.08496'	.078	.156	.15
30	23	.010	.020	.0157 '	.0422	.0850	.081	.162	.146
30	24	.00935'	.0194 '	.0186 '	.0405	.0828	.0759	.1542	.136
30	25	.0103	.021190'	.0195	.043	.086	.0783	.1566	.144
30	26	.0088	.0176	.0175	.0358	.0816	.080	.164	.1437
30	27	.0095	.01966	.018	.0424	.0848	.077	.154	.129
30	28	.0088	.0176	.01735'	.044	.088	.08056	.170	.143
30	29	.0094	.0192	.0180	.041	.0842	.075	.1510	.151
30	30	.009	.018	.017	.0348	.0696	.082	.164	.142
31	1	-	-	-	.032	.22	.11	.36	.18
31	2	.014 "	.04 "	.02 "	.064 "	.18	.09	.36	.18
31	3	.0095 "	.044 "	.022 "	.055	.18	.11	.266	.196
31	4	.0117	.042	.028	.06	.14	.10	.22860	.18
31	5	.014 "	.0390 "	.024 "	.061 "	.1236	.10	.22	.1945
31	6	.012 "	.032 "	.0219 "	.058 "	.116 "	.100 "	.2026	.185
31	7	.010 "	.028 "	.0222 "	.053	.106	.0940	.210	.19
31	8	.011	.0236	.0221 "	.053	.106	.097	.194	.1712
31	9	.012	.0246	.0205 "	.048	.096	.090	.194	.176
31	10	.0102	.024	.022	.047	.112	.085	.170	.1586
31	11	.0104	.0254	.0205	.04867"	.1072	.084	.1944	.17
31	12	.0098 "	.0252	.018 "	.047	.1024	.086	.186	.16
31	13	.00939"	.0204	.021 "	.046	.096	.08625'	.17250'	.157
31	14	.0095	.020	.021 "	.0446	.0892	.091	.186	.152
31	15	.010	.020	.01748"	.0453	.0906	.0897	.184	.148
31	16	.0105	.02132	.0186	.04566"	.0918	.0746	.1492	.1516
31	17	.00997'	.02172	.0168 "	.0455	.0946	.081	.162	.152
31	18	.0088	.0214	.0184	.0413	.090	.080	.168	.151
31	19	.0096	.0208	.0185	.042	.086	.078	.164	.1513
31	20	.00983'	.02272	.0194	.0404	.090	.081	.162	.151
31	21	.010	.020	.0169	.0387	.088	.081	.1668	.15
31	22	.00960"	.01920	.0185	.042	.084	.079	.162	.149
31	23	.0100	.0200	.018	.0413	.0826	.082	.164	.15
31	24	.0080	.01888	.0172	.0355	.084	.08045'	.16090'	.15
31	25	.0100	.0200	.0188	.041	.0862	.077	.1608	.1397
31	26	.0094	.0208	.01503'	.043	.088	.079	.158	.144
31	27	.0089	.0192	.0184	.038	.0790	.0680	.160	.146
31	28	.0099	.02022	.0156	.0412	.0876	.0763	.1592	.1336
31	29	.0093	.0190	.01787'	.0363	.0726	.08	.16444'	.146
31	30	.0098	.0196	.0144	.042	.086	.074	.1568	.1258
31	31	.0097	.0194	.018	.0371	.0742	.078	.156	.144
32	1	-	-	-	.0305	.22	.11	.34	.17
32	2	.012 "	.04 "	.02 "	.06	.22	.11	.36	.18
32	3	.013 "	.054 "	.027 "	.056	.20	.11	.2488	.20
32	4	.0124	.052	.026	.056	.12	.114	.2432	.19
32	5	.013	.0338	.025	.054	.118	.105	.24	.178

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
32	6	.012 "	.0288 "	.021 "	.053 "	.128 "	.108 "	.228	.185
32	7	.0121 "	.030 "	.02216 "	.047 "	.112 "	.0937 "	.22	.180 '
32	8	.011 "	.0280 "	.02034 "	.057 "	.114 "	.0893 "	.210 '	.182
32	9	.01064 "	.024 "	.023 "	.046 "	.10890 "	.090 "	.20	.17
32	10	.0107 "	.024 "	.022 "	.049 "	.1048 "	.091 "	.20	.167
32	11	.0112 "	.024 "	.018 "	.046 "	.092 "	.085 "	.1812 "	.16
32	12	.01134 "	.02268 "	.020 "	.045 "	.090 "	.090 "	.180 "	.156
32	13	.011 "	.022 "	.020 "	.0423 "	.092 "	.087 "	.174 "	.154
32	14	.011 "	.022 "	.0206 "	.0514 "	.1028 "	.085 "	.170 "	.164
32	15	.009 "	.024 "	.0187 "	.048 "	.096 "	.087 "	.174 "	.159
32	16	.0088 "	.02228 "	.019 "	.0407 "	.0814 "	.087 "	.174 "	.158
32	17	.0099 "	.0198 "	.017 "	.043 "	.0878 "	.087 "	.174 "	.153
32	18	.0094 "	.0210 "	.018 "	.0417 "	.090 "	.076 "	.166 "	.151
32	19	.0090 "	.020 "	.018 "	.042 "	.084 "	.0845 "	.1690 "	.15
32	20	.00945 "	.0200 "	.0176 "	.0427 "	.0926 "	.079 "	.172 "	.15
32	21	.0097 "	.02204 "	.019 "	.043 "	.086 "	.0757 "	.168 "	.154
32	22	.00834 "	.02028 "	.0183 "	.0415 "	.0836 "	.0815 "	.16508 "	.146
32	23	.0101 "	.0202 "	.0184 "	.0408 "	.08386 "	.080 "	.160 "	.147
32	24	.010 "	.020 "	.018 "	.043 "	.086 "	.080 "	.162 "	.145
32	25	.0089 "	.01810 "	.0175 "	.0381 "	.0816 "	.0719 "	.1578 "	.152
32	26	.0094 "	.0188 "	.0178 "	.042 "	.084 "	.0795 "	.1590 "	.141
32	27	.0080 "	.0168 "	.01636 "	.043 "	.090 "	.0793 "	.1586 "	.144
32	28	.0090 "	.0186 "	.0178 "	.0402 "	.0804 "	.0713 "	.150 "	.146
32	29	.00774 "	.01776 "	.01556 "	.0419 "	.0902 "	.0778 "	.162 "	.1363 "
32	30	.00922 "	.0200 "	.018 "	.0382 "	.0764 "	.06604 "	.1654 "	.1475
32	31	.00803 "	.01606 "	.01576 "	.042 "	.08594 "	.076 "	.1564 "	.129
32	32	.0094 "	.0188 "	.0176 "	.0384 "	.0768 "	.0662 "	.1324 "	.146
33	1	.011 "	.052 "	.026 "	.04 "	.2 "	.1 "	.40 "	.20
33	2	.011 "	.052 "	.026 "	.059 "	.20 "	.10 "	.38 "	.19 '
33	3	.015 "	.050 "	.025 "	.052 "	.186 "	.10 "	.26 "	.20
33	4	.011 "	.048 "	.024 "	.055 "	.144 "	.109 "	.224 "	.195
33	5	.0123 "	.044 "	.0234 "	.062 "	.124 "	.095 "	.222 "	.20
33	6	.012 "	.0328 "	.0230 "	.058 "	.1210 "	.0978 "	.1956 "	.19
33	7	.01082 "	.0274 "	.0203 "	.053 "	.12 "	.096 "	.210 "	.1786 "
33	8	.0117 "	.0246 "	.021 "	.0514 "	.112 "	.097 "	.194 "	.171
33	9	.0123 "	.0272 "	.0183 "	.052 "	.104 "	.0956 "	.206 "	.16
33	10	.010 "	.022 "	.0198 "	.045 "	.104 "	.089 "	.178 "	.164
33	11	.0106 "	.0212 "	.021 "	.051 "	.1076 "	.091 "	.192 "	.16
33	12	.0100 "	.0200 "	.020 "	.0428 "	.106 "	.08 "	.196 "	.162
33	13	.010 "	.020 "	.019 "	.052 "	.104 "	.0868 "	.18 "	.16
33	14	.0107 "	.0214 "	.0187 "	.046 "	.1004 "	.082 "	.1716 "	.157
33	15	.011 "	.0224 "	.0189 "	.0457 "	.0914 "	.0781 "	.158 "	.15
33	16	.010 "	.0226 "	.0195 "	.0455 "	.0970 "	.0779 "	.1558 "	.152
33	17	.00997 "	.02068 "	.01937 "	.04735 "	.09470 "	.0806 "	.1626 "	.154
33	18	.00902 "	.01804 "	.017 "	.0397 "	.0794 "	.0802 "	.172 "	.15
33	19	.0097 "	.0194 "	.0181 "	.0448 "	.0896 "	.078 "	.168 "	.1468
33	20	.0095 "	.0190 "	.019 "	.042 "	.092 "	.0819 "	.1638 "	.1495
33	21	.0093 "	.0188 "	.0169 "	.0434 "	.090 "	.08 "	.1656 "	.151
33	22	.0096 "	.02114 "	.0168 "	.038 "	.086 "	.078 "	.164 "	.147
33	23	.00917 "	.020 "	.0178 "	.040 "	.080 "	.07923 "	.15846 "	.152

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
33	24	.0095	.02034	.01816	.0415	.090	.07774	.16	.156
33	25	.010	.020	.0161	.043	.086	.078	.160	.146
33	26	.0091	.0194	.0177	.039	.080	.073	.154	.1324
33	27	.0100	.0200	.0184	.0430	.0864	.075	.160	.14
33	28	.00892	.01784	.0173	.0344	.0868	.079	.158	.143
33	29	.0091	.02014	.0185	.040	.080	.0741	.1494	.145
33	30	.00844	.01688	.0167	.0415	.0858	.0792	.164	.138
33	31	.0096	.020	.0179	.0401	.0802	.0689	.1378	.141
33	32	.00866	.0174	.0165	.041	.0866	.078	.160	.132
33	33	.010	.020	.018	.040	.080	.069	.138	.14
34	1	-	-	-	.06	.20	.10	.38	.19
34	2	.010	.048	.024	.056	.18	.09	.36	.18
34	3	.014	.0530	.0265	.048	.20	.106	.24	.187
34	4	.014	.048	.024	.058	.130	.106	.230	.19
34	5	.0128	.040	.0205	.059	.118	.10	.2282	.18
34	6	.011	.0284	.022	.05474	.114	.0986	.2296	.194
34	7	.0116	.030	.023	.0493	.106	.095	.22	.183
34	8	.011	.030	.023	.0497	.110	.091	.20	.18
34	9	.0123	.0252	.0219	.047	.1048	.0935	.1896	.1673
34	10	.0105	.022	.021	.049	.098	.081	.18	.153
34	11	.011	.0248	.021	.0479	.098	.0852	.188	.166
34	12	.011	.0236	.0203	.045	.090	.08646	.176	.159
34	13	.01055	.022	.019	.0444	.092	.082	.176	.159
34	14	.00965	.0240	.0173	.044	.088	.087	.182	.1605
34	15	.0095	.0190	.0167	.0426	.0934	.090	.180	.144
34	16	.0098	.0200	.0170	.0429	.0858	.0849	.1754	.162
34	17	.0097	.0206	.018	.0423	.090	.0839	.18	.16
34	18	.01027	.02054	.0184	.043	.0890	.08	.176	.146
34	19	.0100	.0200	.0189	.04225	.090	.080	.160	.155
34	20	.0090	.0198	.0164	.0428	.0866	.085	.170	.15
34	21	.01003	.02006	.018	.0426	.0868	.078	.1570	.152
34	22	.00903	.01806	.0185	.042	.084	.0734	.166	.1489
34	23	.00804	.02030	.018	.0409	.0824	.0791	.1582	.151
34	24	.00981	.01962	.0172	.042	.0856	.076	.1640	.151
34	25	.0099	.01994	.0177	.041	.0888	.08	.16	.151
34	26	.0082	.0188	.01701	.0356	.084	.079	.158	.155
34	27	.0095	.0196	.0174	.0405	.0810	.07612	.1564	.1366
34	28	.0103	.0206	.01494	.0404	.0808	.076	.1626	.143
34	29	.00920	.01840	.0172	.0364	.0830	.0803	.1606	.142
34	30	.0092	.0188	.0170	.0416	.0832	.074	.148	.145
34	31	.009197	.018394	.017	.0335	.0874	.0801	.168	.1408
34	32	.0089	.0202	.0186	.040	.0838	.0715	.1430	.143
34	33	.0093	.0186	.017378	.0333	.0878	.076	.16	.135
34	34	.0072	.0144	.0141	.0398	.0796	.071	.142	.143
35	1	-	-	-	.06	.18	.09	.38	.19
35	2	.010	.0454	.0227	.056	.22	.11	.38	.19
35	3	.013	.050	.025	.055	.18	.098	.268	.19
35	4	.013	.048	.024	.052	.1452	.104	.232	.20
35	5	.014	.046	.026	.053	.12	.107	.22	.182
35	6	.0124	.03318	.023	.051	.122	.10	.20	.17

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
35	7	.0125 "	.0250 "	.0248 "	.058 "	.116 "	.10 "	.2094 '	.185
35	8	.012 "	.024 "	.0215 "	.055 '	.110 '	.0958 '	.202 '	.173
35	9	.0106 "	.026 '	.02259 "	.046 "	.096 "	.086 "	.172 "	.16
35	10	.012 "	.024 "	.02025 "	.048 '	.0992 '	.085 '	.1872 "	.1723 "
35	11	.01146 "	.02292 "	.018 "	.04574 "	.10 "	.084 "	.168 "	.1524 "
35	12	.01038 "	.0214 "	.0196 "	.049 "	.098 "	.089 "	.188 "	.158
35	13	.00905 "	.0204 "	.0208 '	.045 "	.0954 "	.078 "	.192 '	.157
35	14	.01067 '	.02134 '	.0196 "	.042 "	.092 "	.084 '	.168 '	.151
35	15	.0113 '	.0226 '	.0198 "	.046 '	.092 "	.083 "	.166 "	.157
35	16	.01012 "	.0210 '	.0195 "	.0467 '	.096 "	.08 "	.16 "	.154
35	17	.0086 "	.0210 "	.0195 "	.045 "	.092 "	.081 '	.1668 '	.15
35	18	.00946 "	.01892 "	.0197 "	.040 "	.080 "	.081 "	.166 "	.153
35	19	.0096 '	.0210 "	.0172 "	.041 '	.0868 "	.081 '	.172 "	.1534
35	20	.0094 "	.02228 '	.0177 "	.043 "	.090 '	.0756 '	.158 "	.148
35	21	.0091 "	.0182 "	.018 '	.0399 '	.0834 '	.080 "	.162 '	.148
35	22	.00956 '	.01912 '	.0176 '	.04574 '	.09148 '	.0761 '	.158 '	.1475
35	23	.0088 '	.0196 '	.0163 "	.0406 '	.0846 '	.079 "	.16114 "	.149
35	24	.0088 "	.0192 '	.0176 '	.0421 '	.0876 "	.0755 '	.1510 '	.15
35	25	.0095 '	.0198 '	.01758 '	.042 '	.084 '	.0793 "	.1586 "	.146
35	26	.0097 '	.0198 '	.0150 '	.0412 '	.086 '	.077 "	.154 "	.147
35	27	.009 '	.01844 '	.0174 '	.03785 "	.084 "	.070825 "	.16 "	.1516
35	28	.0091 '	.0182 '	.0176 '	.041 "	.082 "	.0773 "	.1546 "	.140
35	29	.00807 '	.01648 '	.0161 '	.0406 '	.0812 '	.075 "	.150 "	.144
35	30	.0089 '	.01956 '	.0177 '	.0383 "	.07808 "	.0675 "	.160 '	.14
35	31	.00754 '	.0190 '	.0149 '	.040 '	.0860 '	.07608 '	.15216 '	.1291
35	32	.00922 '	.0194 '	.0176 '	.03582 '	.07164 '	.0763 '	.1630 "	.138
35	33	.00756 '	.01512 '	.01462 '	.0416 '	.0852 '	.072 "	.148 "	.144
35	34	.00934 '	.01906 '	.0176 '	.0353 '	.0706 '	.077 "	.1588 "	.136
35	35	.0079 '	.0158 '	.0152 '	.041 "	.082 "	.073 "	.146 "	.145
36	1	-	-	-	.057 "	.18 "	.09 "	.36 "	.18
36	2	.009 "	.048 "	.024 "	.053 "	.210 "	.105 "	.36 "	.18
36	3	.0134 "	.052 "	.026 "	.058 "	.16 "	.104 "	.22 "	.193 "
36	4	.014 "	.048 "	.024 "	.06 "	.12 "	.11 "	.230 "	.195 "
36	5	.0136 "	.0410 "	.0247 "	.06 "	.132 "	.1043 "	.2114 "	.18
36	6	.012 "	.028 "	.022 "	.054 "	.1126 '	.094 '	.22 "	.19
36	7	.012 "	.028 "	.024 "	.049 '	.098 "	.093 "	.2130 '	.178
36	8	.01254 "	.02508 "	.0190 "	.049 '	.1072 "	.0945 "	.1890 "	.1645 '
36	9	.0105 "	.024 '	.020 "	.052 '	.104 '	.093 "	.198 "	.165
36	10	.0112 "	.0224 "	.02002 "	.046 "	.096 '	.088 '	.176 '	.17
36	11	.01037 "	.0208 "	.0213 "	.0495 "	.1032 '	.0905 "	.1928 '	.1637 "
36	12	.0105 "	.0246 "	.0203 "	.044 '	.0926 "	.0857 "	.1722 '	.1588 "
36	13	.0107 "	.0214 "	.020 "	.044 "	.08826 '	.086 "	.172 "	.151
36	14	.0104 "	.0228 "	.019795 "	.0438 "	.092 '	.086 '	.172 '	.158
36	15	.0097 '	.0194 "	.020 "	.0451 '	.0902 '	.0812 "	.172 "	.15
36	16	.0102 "	.0204 "	.0187 "	.044 '	.088 '	.07445 "	.184 "	.150
36	17	.0101 "	.0220 '	.0181 '	.045 "	.092 "	.086 '	.172 '	.144
36	18	.0104 "	.0216 "	.019 '	.044 "	.0920 "	.0739 '	.1478 '	.1445
36	19	.0098 "	.0196 "	.0182 "	.0413 "	.092 '	.078 "	.156 "	.1498
36	20	.0096 '	.0192 '	.01617 '	.0403 "	.0806 "	.079 "	.158 "	.145
36	21	.00897 "	.020 '	.0186 '	.042 '	.084 '	.077 "	.154 "	.14476'

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
36	22	.0085	.0202	.018	.0447	.0894	.0765	.16	.15
36	23	.0092	.0192	.0181	.041	.0868	.0826	.1652	.1446
36	24	.00779	.0192	.0172	.03955	.0806	.0764	.1528	.15
36	25	.0094	.0194	.017	.042	.0852	.077	.1666	.147
36	26	.00922	.0194	.0173	.0420	.0840	.076	.162	.144
36	27	.0077	.0190	.0163	.041	.084	.076	.152	.144
36	28	.0088	.01856	.0174	.0393	.080	.07317	.1474	.1488
36	29	.0092	.01902	.01757	.041	.082	.077	.1564	.1421
36	30	.0087	.01786	.0166	.04136	.08272	.0772	.1544	.14
36	31	.00934	.01868	.0184	.0384	.080	.0703	.146	.14
36	32	.00829	.01658	.01606	.041	.0882	.077	.1548	.1322
36	33	.00937	.0192	.017	.0374	.0748	.0774	.1548	.140
36	34	.00822	.01644	.01572	.0402	.0870	.074	.1524	.145
36	35	.0098	.0196	.0176	.0369	.07476	.078	.162	.138
36	36	.00868	.01736	.0159	.0424	.0848	.073	.146	.146
37	1	-	.08	.04	.055	.18	.09	.36	.18
37	2	.014	.046	.023	.056	.206	.103	.352	.176
37	3	.01216	.048	.024	.055	.194	.11	.26	.19
37	4	.0126	.052	.026	.056	.14	.106	.24	.19
37	5	.013	.0326	.025	.057	.124	.102	.22	.189
37	6	.0123	.0328	.023	.052	.116	.098	.202	.183
37	7	.0133	.0266	.0224	.0534	.1230	.09	.2004	.168
37	8	.012	.026	.022	.048	.098	.0882	.20	.1685
37	9	.0113	.0226	.0199	.050	.100	.089	.178	.174
37	10	.011	.026	.020	.050	.1056	.0832	.186	.1607
37	11	.0101	.0226	.020	.0456	.100	.088	.176	.163
37	12	.01085	.02188	.0182	.0445	.1028	.087	.18	.169
37	13	.01048	.02096	.022	.041	.094	.087	.184	.162
37	14	.0104	.02094	.019	.045	.0962	.081	.1732	.1526
37	15	.010	.020	.01768	.0450	.094	.09	.18	.156
37	16	.0098	.0208	.0167	.043	.086	.085	.1748	.1615
37	17	.0093	.0192	.0165	.0416	.0832	.085	.1742	.16
37	18	.00965	.0198	.0171	.04164	.0844	.083	.166	.156
37	19	.0098	.0214	.018	.042	.0874	.081	.172	.156
37	20	.0102	.0204	.017	.045	.090	.077	.168	.1407
37	21	.0089	.0178	.0180	.0444	.0888	.0783	.1566	.147
37	22	.009	.0190	.0177	.0416	.0832	.08	.1634	.146
37	23	.0093	.0186	.017	.041	.082	.080	.162	.148
37	24	.0093	.0186	.01592	.041	.0826	.0754	.1564	.148
37	25	.0087	.01950	.01757	.041	.08432	.077	.166	.147
37	26	.0095	.0190	.0175	.04118	.0828	.081	.1638	.14484
37	27	.00896	.0194	.0169	.041	.082	.076	.16350	.1445
37	28	.00857	.01734	.0168	.0354	.084	.078	.156	.145
37	29	.0093	.0186	.0172	.040	.084	.074	.1528	.133
37	30	.007346	.01956	.01486	.040	.082	.079	.158	.1427
37	31	.00873	.0186	.01726	.0353	.0830	.077	.154	.14
37	32	.0088	.0192	.0173	.0396	.0792	.072	.1470	.14
37	33	.0086	.0172	.0164	.0417	.0834	.074	.1570	.1350
37	34	.0092	.01986	.018	.0386	.0772	.0662	.156	.14
37	35	.00870	.0176	.0162	.041	.086	.076	.1566	.1238

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

Unconditional level of significance (one or two sided) :

Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
37	36	.009	.0190	.0174	.0385	.0770	.0643	.1286	.137
37	37	.0088	.0176	.0168	.0404	.0808	.0762	.1524	.122
38	1	-	.08	.04	.053	.16	.08	.34	.17
38	2	.013	.042	.021	.054	.22	.11	.36	.18
38	3	.013	.044	.022	.055	.16	.10	.24	.18
38	4	.014	.0446	.0223	.06	.128	.11	.22	.19
38	5	.0124	.0388	.024	.0554	.128	.108	.216	.183
38	6	.0114	.0284	.0253	.047	.108	.112	.224	.192
38	7	.0119	.028	.02123	.047	.104	.0942	.194	.17
38	8	.011916	.023832	.0205	.054	.1122	.095	.190	.16
38	9	.012	.024	.0225	.0519	.1070	.095	.2004	.166
38	10	.012	.024	.021	.0494	.0988	.087	.174	.16
38	11	.0113	.02400	.01867	.05	.1070	.083	.184	.151
38	12	.0098	.024	.02023	.047	.095484	.084	.184	.156
38	13	.0100	.0228	.0196	.0443	.0886	.0844	.1706	.148
38	14	.0097	.0230	.017	.0426	.0852	.078	.164	.158
38	15	.0087	.022	.0193	.0414	.08672	.084	.168	.148
38	16	.011	.022	.01978	.045	.0942	.0816	.1632	.15
38	17	.0102	.0204	.0186	.044	.094	.0793	.1594	.152
38	18	.00848	.0202	.01848	.0438	.0932	.077	.1562	.148
38	19	.00905	.01810	.0185	.044	.096	.0789	.1578	.148
38	20	.00982	.01964	.0164	.0396	.0792	.078	.162	.15
38	21	.0096	.0202	.0181	.0424	.08716	.083	.166	.15
38	22	.00893	.01854	.018	.0453	.0916	.0755	.158	.146
38	23	.0097	.01962	.01664	.04046	.08092	.0753	.1656	.148
38	24	.0092	.0184	.017	.042	.0864	.0776	.1606	.151
38	25	.0094	.0188	.0166	.038	.0784	.077	.1576	.146
38	26	.0088	.0188	.0174	.040	.082	.08105	.1630	.1431
38	27	.0094	.0188	.01708	.0408	.086	.079	.15912	.151
38	28	.00872	.0188	.0156	.040	.080	.079	.158	.145
38	29	.0090	.0186	.0168	.0372	.082	.0697	.154	.145
38	30	.0092	.0184	.01730	.041	.082	.0755	.154	.136
38	31	.00808	.01616	.0160	.040	.080	.0749	.156	.142
38	32	.0091	.0182	.0169	.037	.0768	.077	.154	.1437
38	33	.00736	.0176	.0143	.041	.082	.0738	.1482	.14
38	34	.0088	.018246	.0173	.0334	.0852	.076	.1598	.1349
38	35	.00717	.01914	.0171	.038	.0802	.0687	.1380	.14
38	36	.0089	.01866	.01709	.0422	.0844	.074	.1594	.1271
38	37	.00742	.01484	.01388	.0387	.080	.0669	.1338	.138
38	38	.0088	.0176	.0168	.03282	.06564	.073	.146	.1255
39	1	-	.08	.04	.051	.22	.11	.394	.197
39	2	.0125	.04	.02	.05	.20	.10	.34	.17
39	3	.012	.0410	.0205	.05	.18	.102	.24	.18
39	4	.013	.0490	.0245	.0524	.134	.11	.24	.182
39	5	.013	.034	.0246	.057	.1216	.105	.210	.19
39	6	.0125	.0330	.023	.049	.118	.10	.20	.182
39	7	.0105	.028	.024	.0504	.122	.094	.188	.175
39	8	.0114	.0266	.0268	.049	.098	.097	.200	.16
39	9	.0116	.026	.020	.049	.102	.091	.186	.17
39	10	.0117	.0238	.021	.045	.100	.0911	.186	.160

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :								
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10	
39	11	.0103 "	.024 "	.023 "	.049 '	.098 "	.087 '	.174 '	.16	
39	12	.0107 "	.022 "	.0203 "	.0426 "	.0948 "	.084 "	.170 "	.16	
39	13	.0100 "	.0228 "	.0188 "	.047 "	.1002 "	.087 "	.180 "	.161	
39	14	.0105 "	.0210 "	.0185 '	.0443 "	.092 "	.084 "	.168 "	.15	
39	15	.0106 "	.0212 "	.0198 "	.046 '	.092 '	.081 "	.176 '	.1595	
39	16	.0097 '	.0194 '	.019 "	.043 '	.0950 "	.078 "	.18 "	.154	
39	17	.01036 "	.0216 "	.018 "	.044 "	.088 "	.080 '	.170 "	.145	
39	18	.0095 "	.022 "	.0187 '	.0435 "	.088 '	.08 "	.174 "	.15	
39	19	.01052 "	.02104 "	.0188 '	.0433 '	.0898 '	.087 '	.174 '	.154	
39	20	.0103 "	.0214 "	.0182 '	.04176 "	.086 "	.084 "	.170 "	.136	
39	21	.0089 "	.0178 "	.0172 "	.041 '	.090 "	.0767'	.1534 '	.144	
39	22	.0099 "	.0198 "	.0169 "	.0406 "	.0812 "	.0771 "	.162 "	.146	
39	23	.00875 "	.0204 '	.0190 "	.0413 '	.0844 "	.0804'	.1620 '	.1431 '	
39	24	.0091 '	.0186 '	.0174 '	.03855 '	.084 "	.08 "	.16 "	.14739''	
39	25	.00907 '	.01814'	.0154 "	.0407 '	.0814 '	.075 "	.152 '	.149	
39	26	.0084 "	.0188 '	.0170 "	.0400 "	.082 '	.079 "	.162 "	.143	
39	27	.0092 '	.01900'	.0172 "	.04213 '	.086 '	.0784'	.15746'	.149	
39	28	.0091 '	.01890'	.01657'	.0404 '	.0846 "	.078 '	.156 '	.14	
39	29	.0081 '	.0170 '	.0166 '	.041 '	.084 '	.0765'	.156 "	.145	
39	30	.00880 '	.01760'	.01764'	.039 '	.0802 "	.0721''	.150 "	.145	
39	31	.00896 '	.0188 '	.0171 '	.039 "	.084 "	.075 "	.150 "	.1383 "	
39	32	.0087 '	.0174 '	.0163 '	.040 "	.0820 '	.0749'	.156 "	.143	
39	33	.00963 '	.01926'	.0170 "	.0386 '	.0772 '	.0672 "	.1548 "	.143	
39	34	.0080 '	.01622'	.01546'	.039 '	.0840 '	.0727 "	.148 '	.125	
39	35	.00885 '	.0190 '	.01709'	.0352 "	.0784 '	.076 "	.160 "	.1363	
39	36	.00782 '	.01564'	.01475'	.0395 '	.0830 '	.0705'	.1410 '	.14	
39	37	.0088 "	.0184 '	.01684'	.03390 '	.06780'	.0754 "	.1608 '	.1296 "	
39	38	.0080 '	.01614'	.01485'	.040 '	.080 '	.0691 "	.1388 "	.140	
39	39	.00917 '	.01834'	.0176 "	.0346 '	.0692 '	.075 "	.150 "	.1283	
40	1	-	.08 "	.04 "	.06 "	.22 "	.11 "	.38 "	.19	
40	2	.01164 "	.054 "	.027 "	.053 "	.194 "	.097 "	.38 '	.19 '	
40	3	.012 "	.050 "	.025 "	.06 "	.18 "	.096 "	.24 "	.19	
40	4	.011 "	.052 "	.026 "	.057 "	.12 "	.10 "	.2150 "	.19 '	
40	5	.011 "	.0428 "	.022 "	.056 '	.130 "	.104 "	.2224 "	.18	
40	6	.012 "	.024 "	.0226 "	.053 "	.120 "	.0969'	.22 "	.18	
40	7	.012 "	.028 "	.021 '	.0543 "	.1086 "	.101 "	.202 "	.18	
40	8	.0115 "	.024 "	.022 "	.049 "	.106 '	.0937''	.192 "	.175 '	
40	9	.0108 "	.026 "	.0212 "	.048 "	.1150 "	.085 '	.1992 "	.172	
40	10	.0102 "	.0252 '	.0196 "	.046023''	.098 '	.0884'	.1768 '	.17	
40	11	.0104 "	.0208 "	.0207 "	.045 '	.10 "	.087 "	.1854 "	.1613	
40	12	.011 "	.022 "	.0197 "	.045 "	.090 "	.086 "	.172 "	.1616	
40	13	.0097 "	.0252 "	.020 "	.0463 "	.0926 "	.0869''	.1742 "	.1502	
40	14	.01088 "	.022 "	.019 "	.0424 "	.0848 "	.080 '	.160 '	.164	
40	15	.011 "	.0224 "	.0186 "	.04197 '	.08394'	.080 '	.1714 "	.153	
40	16	.0102 "	.0212 "	.0179 "	.0429 "	.0872 "	.083 '	.166 '	.1527 '	
40	17	.00927 "	.01912''	.0165 "	.0423 "	.090 '	.083 "	.166 "	.153	
40	18	.0096 "	.01964''	.0163 "	.0399 "	.0850 '	.082 "	.164 "	.15	
40	19	.0092 "	.01932''	.01641''	.0394 "	.0788 "	.0795'	.1608 '	.151	
40	20	.009486''	.01992''	.0172 '	.0407 '	.0814 '	.081 '	.162 '	.150	
40	21	.0096 "	.0208 '	.018 '	.04275 "	.0856 "	.08 "	.166 "	.149	

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
40	22	.0101	.0202	.0164	.0436	.0872	.085	.170	.15
40	23	.00896	.0186	.0171	.042	.084	.078	.1614	.15
40	24	.0096	.0192	.018	.0392	.084	.0744	.152	.1488
40	25	.0088	.0186	.017	.041	.08590	.077	.1578	.148
40	26	.0092	.01926	.0161	.037	.0868	.0774	.166	.145
40	27	.00895	.01790	.0172	.0393	.0796	.0784	.158	.148
40	28	.00934	.01868	.01678	.041	.082	.077	.154	.14535
40	29	.00924	.0186	.01475	.0402	.082	.076	.1548	.1408
40	30	.0087	.01766	.0170	.0355	.082	.076	.1564	.141
40	31	.00882	.01764	.0177	.039	.0796	.072	.1514	.1308
40	32	.007405	.018	.01473	.039	.0844	.074	.1530	.1386
40	33	.0088	.0176	.0171	.0341	.0812	.074	.158	.1435
40	34	.00899	.01798	.0171	.0385	.0796	.06969	.154	.142
40	35	.0084	.0168	.0160	.040	.080	.07401	.14802	.1283
40	36	.0092	.01852	.0176	.0369	.0738	.077	.1552	.137
40	37	.00842	.01688	.01565	.0406	.08560	.0713	.1426	.144
40	38	.0090	.0192	.017	.03558	.07116	.0767	.1610	.1322
40	39	.0084	.01724	.0156	.0393	.0828	.0706	.1426	.141
40	40	.0092	.0184	.01697	.0359	.0718	.0774	.1548	.130
41	1	-	.06	.03	.06	.22	.11	.374	.187
41	2	.013	.050	.025	.050	.186	.093	.364	.182
41	3	.013	.046	.023	.056	.18	.11	.2670	.196
41	4	.0126	.04232	.02116	.057	.134	.106	.22	.19
41	5	.012	.038	.0247	.05486	.114	.096	.2072	.18
41	6	.013	.030	.022	.054	.1110	.094	.2068	.19
41	7	.0113	.0266	.023	.053	.1166	.0963	.1926	.173
41	8	.0132	.0264	.021	.0525	.1050	.097	.194	.166
41	9	.0114	.0228	.0216	.051	.1054	.092	.1994	.166
41	10	.011	.024	.021	.0524	.1048	.089	.190	.1611
41	11	.0108	.02368	.0195	.0439	.100	.0864	.1734	.162
41	12	.0097	.0226	.0195	.0455	.0924	.086	.172	.158
41	13	.0107	.0214	.01863	.048	.102	.084	.184	.16
41	14	.0108	.0220	.0211	.048	.096	.083	.176	.1565
41	15	.0102	.0204	.0181	.044	.0962	.079	.164	.152
41	16	.009	.0208	.0191	.042	.094	.081	.162	.145
41	17	.0085	.0216	.01864	.046	.092	.0806	.1612	.155
41	18	.0098	.0196	.0186	.0465	.0930	.077	.162	.1480
41	19	.00832	.0208	.0187	.04444	.0894	.0733	.16	.1411
41	20	.0087	.0174	.018	.0436	.0872	.0729	.1458	.1382
41	21	.00923	.01846	.019	.042	.092	.0755	.1510	.141
41	22	.0099	.0198	.01688	.0394	.0788	.078	.160	.145
41	23	.0095	.020	.01666	.0405	.08506	.0780	.164	.148
41	24	.0088	.01806	.018	.0424	.0848	.07546	.158	.143
41	25	.0096	.0200	.017	.0414	.084	.077	.160	.14420
41	26	.0083	.01830	.017	.0401	.0802	.0717	.156	.1472
41	27	.0081	.018	.0170	.0394	.0868	.0793	.160	.144
41	28	.0086	.0180	.01701	.0402	.0830	.077	.1548	.146047
41	29	.0091	.0182	.0171	.040	.080	.0744	.1506	.143
41	30	.00760	.0182	.01574	.03993	.07992	.074	.15010	.142
41	31	.00889	.0182	.0170	.03731	.0788	.0688	.1526	.145

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
41	32	.0088	.0176	.0176	.039307	.078614	.0743	.1526	.134
41	33	.00805	.01628	.0158	.039	.078	.0772	.1544	.138
41	34	.00893	.01786	.0166	.03587	.074	.0747	.1494	.14
41	35	.00723	.01690	.01385	.0394	.0788	.0716	.1446	.142
41	36	.00898	.01796	.0164	.0405	.0810	.0749	.1498	.131
41	37	.0094	.0188	.0166	.0374	.0748	.0639	.1552	.137
41	38	.0086	.0180	.0160	.0392	.0834	.072	.144	.138
41	39	.0091	.0184	.0166	.0370	.07438	.078	.156	.1327
41	40	.00882	.01764	.0162	.0402	.0804	.0707	.1464	.142
41	41	.00727	.01454	.0174	.0373	.0746	.0789	.1578	.1325
42	1	-	.06	.03	.06	.20	.10	.36	.18
42	2	.012	.048	.024	.05	.20	.10	.352	.176
42	3	.012	.042	.021	.05	.170	.10	.244	.194
42	4	.0114	.052	.026	.06	.126	.106	.222	.1844
42	5	.012	.042	.0263	.055	.1276	.109	.218	.183
42	6	.0124	.0270	.026	.051	.122	.10	.216	.17
42	7	.0116	.0278	.024	.050	.108	.099	.2110	.17
42	8	.0113	.0226	.0204	.048	.096	.094	.198	.17
42	9	.0127	.02634	.024	.050	.106	.090	.18962	.17
42	10	.01065	.0230	.0196	.046	.1000	.088	.1826	.169
42	11	.0113	.02272	.0221	.050	.100	.0897	.192	.156
42	12	.0094	.0240	.0186	.043	.098	.084	.172	.1494
42	13	.0103	.02190	.019	.045	.09748	.0886	.1776	.155
42	14	.0095	.0238	.0199	.043	.086	.081	.16288	.164
42	15	.0091	.0216	.0198	.0409	.0930	.09	.18	.15
42	16	.0101	.0202	.0193	.042	.084	.084	.168	.16
42	17	.0099	.0198	.0185	.0425	.088	.0773	.160	.152
42	18	.0097	.0196	.0184	.0435	.0870	.0802	.1736	.139
42	19	.009	.0202	.0184	.0425	.0850	.0856	.1712	.152
42	20	.0097	.0214	.01803	.0414	.08630	.081	.168	.150
42	21	.00996	.0202	.0182	.0415	.086	.079	.164	.15
42	22	.0084	.0168	.0175	.043	.0898	.0847	.1694	.1518
42	23	.00898	.01896	.0183	.0436	.090	.075	.150	.1418
42	24	.00897	.0194	.0174	.0404	.082	.081	.162	.144
42	25	.0082	.0170	.0182	.03908	.0784	.076	.152	.1417
42	26	.0092	.01938	.01652	.0399	.0824	.078	.156	.1451
42	27	.00876	.01752	.01563	.044	.088	.0754	.16	.140
42	28	.0089	.0182	.0170	.0412	.0832	.0774	.1548	.1483
42	29	.0090	.0186	.01644	.0407	.0814	.0737	.1474	.142
42	30	.0090	.0180	.017	.0392	.0784	.080	.1624	.143
42	31	.0083	.01808	.0166	.03883	.078	.074	.16	.1451
42	32	.0091	.0182	.0169	.0390	.0784	.0713	.1492	.142
42	33	.008855	.017710	.0179	.0389	.0778	.0747	.152	.136
42	34	.00855	.01764	.0163	.040	.080	.077	.154	.1383
42	35	.00897	.01794	.017	.037	.07606	.074	.148	.14
42	36	.00789	.0164	.01491	.04033	.08066	.0715	.1464	.141
42	37	.0088	.0176	.0163	.03324	.0762	.074	.1510	.1325
42	38	.00748	.01774	.0138	.03871	.07742	.0663	.146	.1359
42	39	.00852	.018	.01624	.040	.0850	.0719	.148	.138
42	40	.0075	.0150	.01365	.0376	.0770	.06268	.1582	.1345

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
42	41	.0087 '	.01790'	.01624 '	.0404 '	.082 '	.0724 '	.1474 '	.139
42	42	.0078 '	.0156 '	.0141 '	.0375 '	.0750	.0630 '	.1260 '	.133
43	1	-	.06 "	.03 "	.06 "	.20	.10	.36	.18
43	2	.011 "	.044 "	.022 "	.05 "	.192	.096	.36	.18
43	3	.012 "	.0486 "	.0243 "	.06 "	.20	.10	.26	.188
43	4	.0127 "	.048 "	.024 "	.056 "	.130 "	.103	.22	.18
43	5	.015 "	.038 "	.026 "	.05403"	.116 "	.105	.210	.18
43	6	.011 "	.032 "	.024 "	.053 '	.106 '	.0966 '	.200	.18
43	7	.012 "	.030 "	.0223 "	.048 "	.114 '	.098 "	.196	.169
43	8	.0118 "	.0296 "	.0222 "	.048 "	.1106 "	.0904 "	.184	.1724
43	9	.0108 "	.02370"	.0222 "	.048 "	.104 "	.086 "	.20	.164
43	10	.010 "	.0244 "	.021 "	.0458 '	.112 "	.09	.18	.164
43	11	.0099 "	.022 "	.0195 "	.047 "	.100 "	.087 "	.174	.169
43	12	.0108 "	.0224 "	.022 "	.0484 "	.098 '	.089 "	.178	.160
43	13	.0094 "	.0210 "	.0208 "	.044 "	.1030 "	.08	.176	.1604
43	14	.00982"	.022 "	.018 "	.0452 '	.0904 '	.08435"	.184	.157
43	15	.0107 "	.0214 "	.019 "	.042 "	.09418"	.0848 "	.1708	.149
43	16	.0102 "	.0204 "	.0184 "	.0443 "	.092 '	.0824 "	.1648	.149
43	17	.0099 "	.0202 "	.018 "	.0429 "	.0926 "	.0804 "	.1608	.1494
43	18	.0099 "	.0202 "	.0166 "	.041 "	.092	.079 "	.158	.149
43	19	.0095 "	.0196 "	.0159 "	.0384 "	.0852 '	.0763	.1636	.150
43	20	.0095 "	.01914"	.0158 '	.0375 "	.088 "	.07760"	.15520	.144
43	21	.0096 "	.0202 "	.0161 '	.0377 '	.0754 '	.0772 '	.1544	.142
43	22	.00946'	.01892'	.0168 "	.0395 "	.0790 "	.078 "	.158	.1459
43	23	.0094 "	.0212 "	.0172 "	.0405 "	.08350'	.077	.1610	.144
43	24	.00864'	.01728'	.0183 "	.0409 "	.086 '	.0788 '	.1576	.147
43	25	.0089 "	.0186 "	.0163 "	.038 '	.08534"	.07890	.15780	.144
43	26	.0095 "	.0190 "	.0176 "	.040 '	.0852 '	.078 '	.1588	.14135'
43	27	.0091 '	.0182 '	.0165 '	.0395 '	.0812 '	.0798 '	.1596	.1437'
43	28	.0079 "	.0190 '	.0168 "	.03837"	.0854 '	.076 '	.1544	.147
43	29	.0089 '	.01872"	.016276'	.040 '	.0812 '	.074 '	.148	.143
43	30	.0087 '	.0180 '	.01705	.0390 '	.0780	.0791 "	.1582	.140
43	31	.00889'	.01778'	.01511 "	.040 '	.08116'	.0784 '	.1568	.139
43	32	.00885"	.0180 '	.0164 '	.03554"	.0822	.076	.152	.1414
43	33	.0086 '	.0180 '	.0166 '	.0386 '	.0800 '	.0736	.1482	.142
43	34	.00747'	.0176 '	.0145 '	.0384 '	.0768 '	.075	.1507444"	.1383
43	35	.00847'	.01806'	.0163 '	.0406 '	.0818 '	.0773	.1546	.1417
43	36	.0091 '	.01854'	.0172 '	.0384	.0788 '	.0668	.148	.14
43	37	.0083 '	.01694'	.0158 '	.0387 '	.0774 '	.0726 '	.14968	.14
43	38	.0084 '	.0184 '	.0168 '	.0350 '	.0758 '	.074	.1526	.133
43	39	.00804'	.01608'	.01477 '	.038 '	.0796 '	.0683	.1380	.136
43	40	.0089 '	.01792'	.01655 '	.0327 '	.0812	.072	.1516	.12244
43	41	.0080 '	.0160 '	.01455	.0377 '	.07824'	.0648 '	.1296	.135
43	42	.0086 '	.01822'	.0164 '	.0323 '	.0646 '	.073 '	.1504	.1404
43	43	.00815'	.01630'	.015	.039	.078	.0652	.1304	.134
44	1	-	.06 "	.03 "	.06 "	.20	.10	.34	.17
44	2	.011 "	.042 "	.021 "	.0534	.18	.09	.34	.17
44	3	.011 "	.0454 "	.0227 "	.056 "	.184	.10	.24	.19
44	4	.013 "	.04908"	.02454 "	.055 "	.12 "	.097	.22	.186
44	5	.013 "	.042 "	.025 "	.0516 '	.118	.106 "	.216	.184

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
44	6	.013 "	.028 "	.0238 "	.0575 "	.1150 "	.105 ' "	.224 "	.18
44	7	.012 "	.02694 "	.02445 "	.05 "	.10 "	.098 "	.206 "	.18
44	8	.0112 "	.02734 "	.0212 "	.049 "	.104 "	.095 "	.196 "	.1707
44	9	.0104 "	.0264 "	.02126 "	.04825 "	.110 "	.095 "	.190 "	.163
44	10	.0107 "	.022 "	.0211 "	.048 "	.100 "	.088 "	.186 "	.174
44	11	.0109 "	.0236 "	.020 "	.043 "	.0906 "	.088 "	.180 "	.1551 "
44	12	.01003 "	.022 "	.020 "	.046 "	.10032 "	.0865 "	.1730 "	.162 "
44	13	.0105 "	.022690 "	.01861 "	.047 "	.094 "	.088 "	.180 "	.158
44	14	.0103 "	.0206 "	.018 "	.0446 "	.09094 "	.08303 "	.16606 "	.16
44	15	.0093 "	.0186 "	.0189 "	.0414 "	.0828 "	.07671 "	.15342 "	.15
44	16	.0104 "	.0214 "	.018 "	.0423 "	.0926 "	.079 "	.170 "	.153
44	17	.0095 "	.01932 "	.0188 "	.0419 "	.0868 "	.082 "	.164 "	.15
44	18	.0087 "	.020 "	.0186 "	.0423 "	.0846 "	.0802 "	.1604 "	.15
44	19	.0083 "	.01990 "	.0182 "	.04181 "	.090 "	.074 "	.1602 "	.144
44	20	.00813 "	.0210 "	.0183 "	.044 "	.0904 "	.08 "	.16 "	.154
44	21	.0084 "	.020 "	.0184 "	.043 "	.0906 "	.081 "	.166 "	.150
44	22	.00892 "	.01784 "	.0177 "	.043 "	.088 "	.081 "	.162 "	.15
44	23	.0092 "	.0186 "	.0184 "	.043 "	.08816 "	.0729 "	.1458 "	.1348
44	24	.0093 "	.01978 "	.01687 "	.0391 "	.0782 "	.0771 "	.1542 "	.142
44	25	.00896 "	.0186 "	.01764 "	.040 "	.080 "	.076 "	.152 "	.144
44	26	.00874 "	.0186 "	.0173 "	.039 "	.082 "	.0754 "	.1508 "	.145
44	27	.00956 "	.01922 "	.0167 "	.0398 "	.0796 "	.076 "	.152 "	.1417
44	28	.0088 "	.0176 "	.0157 "	.040 "	.080 "	.074 "	.1590 "	.1435
44	29	.0086 "	.0182 "	.01695 "	.03887 "	.0814 "	.0749 "	.1498 "	.145
44	30	.00886 "	.01802 "	.0181 "	.0394 "	.0788 "	.079 "	.158 "	.138
44	31	.0086 "	.01754 "	.01698 "	.039 "	.078 "	.0767 "	.1534 "	.14065 "
44	32	.0079 "	.01776 "	.01595 "	.0394 "	.0788 "	.0758 "	.1516 "	.146
44	33	.00865 "	.01770 "	.0167 "	.0375 "	.0804 "	.06826 "	.1556 "	.1385
44	34	.0088 "	.0176 "	.0164 "	.03893 "	.080 "	.074 "	.1526 "	.1313
44	35	.00809 "	.0170 "	.0155 "	.03815 "	.0802 "	.07533 "	.15066 "	.137
44	36	.0088 "	.0176 "	.01639 "	.0349 "	.0806 "	.0774 "	.1548 "	.1398
44	37	.00711 "	.0184 "	.01732 "	.038 "	.0790 "	.06926 "	.140 "	.14
44	38	.00862 "	.01724 "	.016 "	.0391 "	.0782 "	.073 "	.146 "	.1248
44	39	.0087 "	.0186 "	.0169 "	.0361 "	.07358 "	.073 "	.154 "	.135
44	40	.0082 "	.0164 "	.01559 "	.0389 "	.0810 "	.0702 "	.1404 "	.136
44	41	.00844 "	.0182 "	.01681 "	.03434 "	.06868 "	.073 "	.154 "	.1252
44	42	.00823 "	.01706 "	.0153 "	.0385 "	.0806 "	.0669 "	.1338 "	.1347
44	43	.0086 "	.0180 "	.0171 "	.0340 "	.0680 "	.072 "	.1492 "	.141
44	44	.00855 "	.01710 "	.01562 "	.038 "	.076 "	.0672 "	.1344 "	.135
45	1	-	.06 "	.03 "	.05 "	.18 "	.09 "	.34 "	.17
45	2	.010 "	.040 "	.020 "	.06 "	.20 "	.10 "	.36 "	.18
45	3	.014 "	.052 "	.026 "	.053 "	.188 "	.094 "	.26 "	.181
45	4	.012 "	.052 "	.026 "	.05391 "	.138 "	.11 "	.22 "	.19
45	5	.0128 "	.038 "	.0241 "	.057 "	.114 "	.102 "	.212 "	.179
45	6	.012 "	.032 "	.02215 "	.052 "	.112 "	.100 "	.200 "	.1813
45	7	.012 "	.030 "	.022 "	.0525 "	.122 "	.095 "	.2052 "	.17
45	8	.0120 "	.0270 "	.021 "	.048 "	.114 "	.0898 "	.1836 "	.17
45	9	.011 "	.0238 "	.020 "	.050 "	.104 "	.088 "	.176 "	.164
45	10	.0115 "	.0244 "	.0192 "	.0464 "	.1012 "	.089 "	.182 "	.170
45	11	.01023 "	.02252 "	.0198 "	.0446 "	.1020 "	.085 "	.17702 "	.16938

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
45	12	.0114 "	.0228 "	.0201 "	.044 "	.088 "	.0856 '	.182	.158
45	13	.01043 "	.02136 "	.0199 "	.04527 "	.0972 "	.086 '	.1770 '	.156
45	14	.0099 "	.024 "	.0193 "	.0412 "	.094 "	.086 "	.180 '	.157
45	15	.010 "	.0224 "	.0175 "	.0465 "	.0930 "	.082 "	.172 '	.148
45	16	.0096 "	.02006 "	.0167 "	.043 "	.0904 "	.082 "	.166 '	.15
45	17	.010 '	.020 '	.019 "	.0439 '	.0878 '	.0840	.1680	.148
45	18	.0096 "	.0192 "	.0188 "	.0415 "	.0830 '	.075 "	.160 '	.1506
45	19	.0102 "	.02070 "	.0175 "	.041 "	.082 "	.080 "	.160 "	.145
45	20	.010 "	.020 "	.0173 "	.0411 "	.084 "	.081 "	.162 "	.15
45	21	.00958 "	.020 "	.0176 "	.0402 '	.0804 '	.0778 '	.162 "	.144
45	22	.0093 "	.0208 "	.0176 "	.040 '	.0816 "	.077 '	.16326 "	.146
45	23	.00966 "	.01932 "	.0180 "	.0413 "	.0836 "	.0813 "	.1626 "	.145
45	24	.0087 '	.0174 '	.0174 "	.0406 "	.0850 "	.0775 '	.166	.1460
45	25	.00805 "	.01924 '	.0156 "	.0413 "	.0846 '	.0736 '	.152	.1378
45	26	.00896 "	.01948 "	.0164 "	.03995 "	.07990 "	.076	.152	.142
45	27	.0088 '	.0176 '	.0173 '	.042 '	.084 '	.07884 "	.158 '	.1405
45	28	.0092 "	.0188 "	.01705 "	.0394 "	.0788 "	.078	.156	.141
45	29	.00772 "	.0178 '	.017 "	.0372 "	.0840 '	.0761 "	.1522 "	.145
45	30	.0088 "	.01904 "	.0164 '	.0395 '	.0790 '	.080	.160	.138
45	31	.00867 '	.0182 "	.0176 '	.03887 '	.07774 '	.07614	.1554	.1410
45	32	.00856 '	.01810 '	.014386 "	.039 '	.0856	.0747 '	.1512 '	.142
45	33	.00863 "	.01766 '	.01654 "	.0403	.084	.0744 '	.1488 '	.143
45	34	.00873 '	.01746 '	.017 "	.0383 '	.07868 "	.07092 "	.152 '	.143
45	35	.0088 '	.0180 '	.0164 '	.0394 '	.0794 '	.072	.154	.1349986
45	36	.0086 '	.01762 '	.0163 '	.0387 '	.0806	.0742	.150	.137
45	37	.00837 '	.01674 '	.0164 '	.0366	.078 '	.076	.1534 '	.139
45	38	.00768 '	.0154 '	.0144 '	.0386	.0772	.0696	.1438 "	.137
45	39	.00852 '	.017538'	.016 '	.0397 '	.07946'	.074	.148	.1276
45	40	.00715 '	.0170 '	.0165 '	.0373 '	.0746 '	.0736 '	.1552 '	.1337
45	41	.0083 '	.0174 '	.0158 '	.03980'	.0834 '	.0704 '	.1408 '	.136
45	42	.00699 '	.0172 '	.01706 '	.0358 '	.0716 '	.074	.1564 '	.1278
45	43	.0083 '	.01728 '	.0156 '	.0384 '	.0794 '	.0688 '	.1376 '	.135
45	44	.00719 '	.01438 '	.01684 '	.03536'	.07134'	.074	.1518 '	.12267
45	45	.0085 '	.0170 '	.0157 '	.039	.078	.068	.136	.134
46	1	-	.06 "	.03 "	.05 "	.18	.09	.38	.19
46	2	.010 "	.03730 "	.01865 "	.05 "	.194	.097	.34 '	.17
46	3	.013 "	.0492 "	.0246 "	.0616 "	.18	.106	.246 '	.18
46	4	.011 "	.048 "	.024 "	.057 "	.126 "	.104	.234	.19
46	5	.0131 "	.0452 "	.0227 "	.051 '	.12126 "	.099 "	.22	.186
46	6	.013 "	.0288 "	.025 "	.052 "	.128 "	.0968 "	.22	.180
46	7	.0115 "	.02640 "	.024 "	.050 "	.110 "	.093	.202 '	.183
46	8	.0117 "	.028 "	.0213 "	.0527 "	.1054 "	.087	.184 '	.17036
46	9	.0107 "	.028 "	.020 "	.048 "	.098 "	.090 "	.1972	.174
46	10	.0107 "	.0228 "	.0216 "	.0469 "	.098 '	.092 "	.192 "	.16
46	11	.0105 "	.0246 "	.0208 "	.045 "	.0930 '	.086 "	.180 "	.1584
46	12	.0102 "	.0204 "	.0184 "	.047 "	.0972 "	.0837 "	.172 '	.153
46	13	.009479 "	.0228 "	.0185 "	.0444 "	.08962 "	.08147	.178 '	.1480
46	14	.0102 "	.02138 "	.0174 "	.044 "	.0930 "	.087	.174	.1508
46	15	.00974 "	.0204 "	.019 "	.04336 "	.08672 "	.0787 '	.1574 '	.156
46	16	.0091 "	.0182 "	.0192 "	.042 "	.0896 "	.083 '	.172 "	.153

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
46	17	.00976 "	.01952 "	.0179 "	.0439 "	.092 "	.080 "	.170 "	.152 "
46	18	.0095 "	.0206 "	.0178 "	.0434 "	.0868 "	.078 "	.162 "	.148 "
46	19	.0093 "	.0194 "	.0166 "	.0403 "	.084 "	.07982 "	.160 "	.15 "
46	20	.0092 "	.0184 "	.0185 "	.04230 "	.08460 "	.0773 "	.160 "	.148 "
46	21	.00948 "	.01896 "	.0181 "	.0435 "	.0870 "	.0734 "	.1652 "	.1386 "
46	22	.00926 "	.01852 "	.016 "	.0417 "	.0872 "	.0722 "	.1444 "	.13351 "
46	23	.0094 "	.0194 "	.0161 "	.041 "	.088 "	.07344 "	.14688 "	.134 "
46	24	.0095 "	.0190 "	.0164 "	.0386 "	.0772 "	.0757 "	.1542 "	.1401 "
46	25	.0092 "	.0184 "	.01729 "	.04083 "	.08166 "	.078 "	.156 "	.143 "
46	26	.0087 "	.0174 "	.0180 "	.042 "	.084 "	.079 "	.158 "	.144 "
46	27	.00896 "	.0184 "	.0166 "	.0385 "	.0776 "	.076 "	.1548 "	.1443 "
46	28	.0082 "	.01794 "	.016742 "	.0397 "	.0794 "	.0752 "	.1504 "	.144 "
46	29	.00889 "	.01778 "	.0155 "	.0386 "	.080 "	.0735 "	.1550 "	.147 "
46	30	.00816 "	.0172 "	.01696 "	.039 "	.0798 "	.0730 "	.1460 "	.140956 "
46	31	.00868 "	.01906 "	.0173 "	.038 "	.076 "	.076 "	.156 "	.14305 "
46	32	.0088 "	.01766 "	.01716 "	.0404 "	.082 "	.0743 "	.1540 "	.14 "
46	33	.0075 "	.0176 "	.01545 "	.041 "	.082 "	.075 "	.150 "	.142 "
46	34	.0086 "	.01736 "	.0170 "	.0350 "	.082 "	.0737 "	.150 "	.140 "
46	35	.0086 "	.0172 "	.0173 "	.038 "	.07710 "	.07298 "	.148 "	.140 "
46	36	.00754 "	.0168 "	.01458 "	.039 "	.078 "	.073 "	.1522 "	.137 "
46	37	.0086 "	.0176 "	.0161 "	.040 "	.080 "	.0731 "	.150 "	.138 "
46	38	.0085 "	.0170 "	.01647 "	.037 "	.0770 "	.0643 "	.1518 "	.141 "
46	39	.00818 "	.01670 "	.0153 "	.0394 "	.0790 "	.071 "	.1470 "	.138407 "
46	40	.00856 "	.0176 "	.0164 "	.0331 "	.0762 "	.0718 "	.1436 "	.1296 "
46	41	.00770 "	.0162 "	.0140 "	.03732 "	.07464 "	.064 "	.1474 "	.134 "
46	42	.0085 "	.01802 "	.0164 "	.0381 "	.0810 "	.071 "	.142 "	.13834 "
46	43	.00752 "	.01504 "	.01347 "	.0366 "	.0732 "	.072 "	.1524 "	.129 "
46	44	.0084 "	.017126 "	.01637 "	.0383 "	.0818 "	.0697 "	.1412 "	.136 "
46	45	.00765 "	.01544 "	.01364 "	.0366 "	.07352 "	.0751 "	.1502 "	.1251 "
46	46	.00902 "	.01804 "	.0164 "	.038 "	.076 "	.070 "	.140 "	.135 "
47	1	-	.06 "	.03 "	.05 "	.18 "	.09 "	.370 "	.185 "
47	2	.015 "	.050 "	.025 "	.05 "	.186 "	.093 "	.34 "	.17 "
47	3	.013 "	.048 "	.024 "	.053 "	.20 "	.10 "	.26 "	.176 "
47	4	.014 "	.052 "	.026 "	.056 "	.130 "	.097 "	.208 "	.176 "
47	5	.0134 "	.040 "	.0243 "	.056 "	.126 "	.10 "	.218 "	.187 "
47	6	.013 "	.032 "	.022 "	.05 "	.118 "	.094 "	.206 "	.177 "
47	7	.012 "	.028 "	.022 "	.054 "	.1160 "	.1055 "	.2110 "	.17 "
47	8	.0116 "	.0232 "	.01969 "	.0506 "	.114 "	.093 "	.186 "	.18 "
47	9	.0112 "	.024 "	.0217 "	.0478 "	.108 "	.091 "	.182 "	.167 "
47	10	.0111 "	.026 "	.0202 "	.048 "	.104 "	.0883 "	.1766 "	.156 "
47	11	.0103 "	.02158 "	.0205 "	.0469 "	.0938 "	.0893 "	.1786 "	.165 "
47	12	.0104 "	.024 "	.020 "	.0447 "	.0894 "	.084 "	.180 "	.16 "
47	13	.0105 "	.0210 "	.019 "	.046 "	.092 "	.086 "	.172 "	.160 "
47	14	.010117 "	.020234 "	.019 "	.04432 "	.092 "	.0823 "	.1646 "	.162 "
47	15	.0095 "	.0230 "	.0175 "	.047 "	.0954 "	.082 "	.1692 "	.15 "
47	16	.010 "	.020 "	.0182 "	.0442 "	.090 "	.0816 "	.1648 "	.159 "
47	17	.0100 "	.0202 "	.0190 "	.0434 "	.0868 "	.079 "	.1594 "	.15 "
47	18	.0093 "	.0196 "	.0163 "	.0415 "	.088 "	.0792 "	.162 "	.15 "
47	19	.00887 "	.020 "	.0194 "	.0421 "	.0842 "	.080 "	.160 "	.15 "
47	20	.0083 "	.0184 "	.0176 "	.042 "	.084 "	.079 "	.158 "	.140 "

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :						
Sample sizes		one s.	two s.	one s.	one s.	two s.	one s.	two s.
		.005	.01	.01	.025	.05	.05	.10
47	21	.0081 "	.0190 '	.01782"	.0426 '	.086 '	.0842 '	.1684 '
47	22	.00817"	.01988"	.0179 "	.0412 '	.086 '	.0796 "	.166 '
47	23	.00849"	.01698"	.019 "	.041 "	.086 "	.078 "	.1610 "
47	24	.00893"	.01786"	.019 "	.0404 "	.084 "	.0768 '	.162 '
47	25	.0088 '	.0184 '	.0155 "	.0413 "	.0856 "	.0703 '	.1570 '
47	26	.00813"	.0190 '	.0174 "	.0387 '	.0774 '	.0756 "	.1512 "
47	27	.00840"	.01856"	.0167 "	.040 '	.0812 "	.0776 "	.1552 "
47	28	.0084 '	.0186 "	.01575'	.043 "	.086 "	.0752 '	.1554 "
47	29	.0093 "	.01870"	.0177 '	.03815'	.080 '	.0776 '	.1552 '
47	30	.00846'	.0170 '	.0163 "	.040 "	.0826 "	.075382"	.150764"
47	31	.0084 "	.0180 "	.0162 '	.039 "	.078 "	.076 '	.15630 '
47	32	.0086 '	.0182 '	.0167 '	.0397 '	.0812 '	.0736 '	.152 "
47	33	.0085 '	.0176 '	.0166 '	.04036'	.08072'	.0736 '	.1472 '
47	34	.00804'	.01724'	.0160 '	.040 '	.080 '	.0737 "	.154 '
47	35	.0084 '	.01758'	.0167 '	.0371 "	.080 "	.0674 "	.1486 '
47	36	.0085 '	.0170 '	.017 '	.0387 '	.082 '	.07266 '	.14532 '
47	37	.00815'	.0166 '	.0154 '	.038 '	.076 '	.073 "	.148 "
47	38	.00876'	.0178 '	.0166 '	.0339 '	.0756 '	.074 "	.148 "
47	39	.00701'	.0176 '	.0163 '	.0381 "	.078 '	.06666 "	.148 "
47	40	.00826'	.01730'	.01574'	.03785'	.07570'	.071 "	.146 "
47	41	.00859'	.0174 '	.017 "	.0346 '	.0762 '	.072 '	.144 "
47	42	.00821'	.01642'	.0149 '	.0381 '	.0762 '	.06632 '	.138 "
47	43	.00865'	.01796'	.0161 '	.0387 '	.0774 '	.0708 '	.144 "
47	44	.00800'	.01600'	.0143 '	.0365 '	.0752 '	.073 "	.146 "
47	45	.0087 '	.0178 '	.016 '	.039 '	.0790 '	.0694 '	.1446 "
47	46	.00807'	.01614'	.01445'	.0371 "	.0744 '	.0746 '	.1508 "
47	47	.0086 '	.0172 '	.01606'	.039 "	.078 "	.070 "	.140 "
48	1	-	.06 "	.03 "	.05 "	.18 "	.09 "	.36 "
48	2	.014 "	.046 "	.023 "	.05 "	.18 "	.09 "	.366 "
48	3	.012 "	.0454 "	.0227 "	.05 "	.192 "	.10 "	.244 "
48	4	.0135 "	.052 "	.026 "	.055 "	.1218 "	.106 "	.230 "
48	5	.012 "	.0448 "	.024 "	.052 "	.120 "	.103 "	.22 "
48	6	.0119 "	.0286 "	.0244 "	.053 "	.118 "	.10 "	.2130 "
48	7	.0116 "	.02594"	.0231 "	.052 "	.1104 '	.094 '	.1996 "
48	8	.0123 "	.026 "	.023 "	.052 "	.1096 "	.0965 "	.1942 "
48	9	.01056"	.0270 "	.0216 "	.0498 "	.0996 "	.09854 "	.19708 "
48	10	.0122 "	.0244 "	.0200 "	.0476 "	.1010 "	.0835 '	.182 "
48	11	.0097 "	.0248 "	.0196 "	.04866"	.09732"	.0837 "	.1732 "
48	12	.010 "	.02208"	.0202 "	.044 "	.096 "	.086 "	.172 "
48	13	.01063"	.02222"	.0216 "	.044 "	.088 "	.0814 '	.18 "
48	14	.0100 "	.0208 "	.0192 "	.047 "	.094 "	.08433 '	.178 '
48	15	.0100 "	.0208 "	.0198 "	.0436 "	.0896 "	.0816 "	.166 "
48	16	.0097 "	.0194 "	.01924"	.0409 "	.0818 "	.0847 "	.1706 '
48	17	.009 "	.018 "	.01735"	.0427 "	.0908 "	.08 "	.172 '
48	18	.00872"	.0198 '	.01865"	.0454 "	.0908 "	.078 "	.164 "
48	19	.0089 '	.0190 "	.0183 "	.043 "	.086 "	.0745 "	.1608 "
48	20	.00913"	.01826"	.0177 "	.041 "	.0840 "	.0788 "	.158 "
48	21	.0095 "	.0190 "	.0174 "	.040 "	.084 "	.0754 '	.1622 '
48	22	.0094 "	.0188 "	.0168 "	.0388 "	.078 '	.0764 "	.1528 "
48	23	.0093 "	.0192 "	.0170 "	.0385 "	.0770 "	.0751 "	.152 "

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
48	24	.0097 "	.02008"	.0173 "	.0393 "	.07902'	.0766	.1532	.138
48	25	.0081 ' "	.0162 ' "	.0163 "	.0404 "	.0808 "	.0784 ' "	.15774'	.1420 ' "
48	26	.0088 ' "	.0176 ' "	.0177 "	.0410 "	.0858 "	.077	.1618 ' "	.145
48	27	.0087 " "	.0192 ' "	.0160 ' "	.039 ' "	.0872 "	.0723 ' "	.1470 ' "	.1343 ' "
48	28	.0089 " "	.0182 " "	.017 ' "	.0387 " "	.0806 ' "	.0773	.1546	.143
48	29	.0088 ' "	.0182 " "	.01685 "	.039 ' "	.08052"	.0713 ' "	.14946"	.1395 ' "
48	30	.0090 " "	.0180 " "	.0152 " "	.0402 ' "	.0808 ' "	.077	.154	.145
48	31	.0082 " "	.01766'	.01684 ' "	.0382 " "	.080	.0747 ' "	.1564 " "	.13606'
48	32	.0090 " "	.01876'	.0170 " "	.0398 ' "	.084 ' "	.074 ' "	.154 ' "	.143
48	33	.00882 " "	.01764"	.0161 ' "	.03935'	.08014"	.074 ' "	.148 ' "	.1397
48	34	.00825 ' "	.0172 ' "	.01473 "	.0391 ' "	.080 ' "	.072 ' "	.15466"	.138
48	35	.00838 ' "	.01682'	.0163 ' "	.0397 ' "	.0804 ' "	.0754 ' "	.1528 ' "	.138
48	36	.00827 ' "	.0170 ' "	.016508 ' "	.0383	.0786	.070 " "	.152	.142
48	37	.008423'	.01692'	.0167 ' "	.039 ' "	.0810 ' "	.073	.1474	.1321
48	38	.008203'	.0166 ' "	.0161 ' "	.038 ' "	.076 ' "	.0735 ' "	.1488 ' "	.138
48	39	.0085 ' "	.01756'	.0167 ' "	.0354 ' "	.07486'	.073	.146	.136
48	40	.00753 ' "	.0168 ' "	.0140 ' "	.03755'	.07826'	.0686 ' "	.1470	.139
48	41	.00863 ' "	.01726'	.01569 ' "	.038 ' "	.076 ' "	.072	.1472	.1384
48	42	.00687 ' "	.0176 ' "	.0162 ' "	.03595'	.0726 ' "	.0728	.1456	.133
48	43	.0084 ' "	.0168 ' "	.0154 ' "	.03733'	.0778 ' "	.0678	.13736'	.134
48	44	.00854 ' "	.0176 ' "	.0166 ' "	.03328'	.0760 ' "	.0714 ' "	.1482	.138
48	45	.0081 ' "	.01690'	.0149621'	.0375 ' "	.0776 ' "	.06345'	.146	.131
48	46	.00862 ' "	.01790'	.0166 ' "	.03219'	.078 ' "	.0709 ' "	.1476	.1354
48	47	.0081 ' "	.01680'	.01504 ' "	.0366 ' "	.0768 ' "	.06209'	.12418'	.1285
48	48	.00691 ' "	.01382'	.0165 ' "	.0328 ' "	.0656 ' "	.071	.142	.137
49	1	-	.050 " "	.025 " "	.05 " "	.170	.085	.354	.177
49	2	.013 " "	.0440 " "	.0220 " "	.055 " "	.20	.10	.34	.17
49	3	.011 " "	.048 " "	.024 " "	.058 " "	.20	.10	.260	.177
49	4	.0129 " "	.04956"	.02478 " "	.056 " "	.132 " "	.10 " "	.208	.18
49	5	.013 " "	.0410 " "	.025 " "	.054 " "	.126 " "	.1029 " "	.22	.186
49	6	.0132 " "	.032 " "	.0226 " "	.052 " "	.1130 ' "	.096 ' "	.2052	.185
49	7	.0114 " "	.028 " "	.0215 " "	.051 " "	.116 ' "	.0935 " "	.212	.18
49	8	.0112 " "	.026 " "	.023 " "	.049 " "	.114 ' "	.091 " "	.186	.1748
49	9	.0103 " "	.024 " "	.0202 " "	.047 " "	.110 " "	.0904 ' "	.190	.169
49	10	.0105 " "	.0258 " "	.022 " "	.047 " "	.098 " "	.084 " "	.180	.161
49	11	.011 " "	.022 " "	.0208 " "	.045 " "	.094 " "	.090 " "	.180	.154
49	12	.0103 " "	.0246 " "	.0182 " "	.0461 " "	.0922 " "	.085 " "	.186	.151
49	13	.010 " "	.0218 " "	.0174 " "	.0442 " "	.096 " "	.085 " "	.170	.16
49	14	.0105 " "	.0214 " "	.0174 " "	.046 " "	.092 " "	.082 " "	.174	.151
49	15	.0095 " "	.0222 " "	.0186 " "	.04114"	.088 " "	.083 ' "	.166	.156
49	16	.010 " "	.02190"	.01794 " "	.0452 " "	.09066"	.0823 ' "	.1646 ' "	.16
49	17	.0091 " "	.0206 " "	.018 " "	.0427 " "	.0882 " "	.079 ' "	.158	.158
49	18	.0099 " "	.0208 " "	.0188 " "	.042 ' "	.084 ' "	.0777 " "	.1564 " "	.153
49	19	.0096 " "	.0194 " "	.0182 " "	.0439 " "	.0878 " "	.078 ' "	.1604 " "	.146
49	20	.0094 " "	.0188 " "	.01666 " "	.0396 " "	.0848 ' "	.078 " "	.1594 " "	.150
49	21	.0094 " "	.0194 " "	.0177 " "	.040 ' "	.080 ' "	.075 " "	.156	.1425
49	22	.0091 " "	.0184 " "	.0180 ' "	.0421 ' "	.0842 ' "	.070 " "	.156	.147
49	23	.00911 " "	.01822"	.0173 ' "	.0416 ' "	.086 ' "	.079	.162	.148
49	24	.0088 " "	.0184 " "	.0173 ' "	.042 ' "	.0866 " "	.0779 " "	.1626	.149
49	25	.0091 " "	.0188 " "	.0160 ' "	.0408 " "	.08646"	.0697 " "	.1394 " "	.1496

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.

Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :								
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10	
49	26	.0091 "	.0182 "	.0172 "	.03778"	.07556"	.0742 "	.1484 "	.13385	
49	27	.00815 "	.0164 "	.0173 "	.0396 "	.0798 "	.074 "	.154 "	.140	
49	28	.0086 "	.0172 "	.0170 "	.039 "	.08106"	.0746 "	.1574 "	.139	
49	29	.0085 "	.01746 "	.0169 "	.03891"	.07782"	.075 "	.154 "	.144	
49	30	.0086 "	.01750 "	.0160 "	.0386 "	.080 "	.076 "	.1534 "	.1416	
49	31	.0085 "	.0178 "	.0164 "	.039 "	.07992"	.07346"	.152 "	.1402	
49	32	.00859 "	.01760 "	.0160 "	.038 "	.076 "	.07494"	.1506 "	.1427	
49	33	.0090 "	.0180 "	.0164 "	.0401 "	.0808 "	.073 "	.148 "	.138	
49	34	.0085 "	.0172 "	.0174 "	.0384 "	.0794 "	.0711 "	.152 "	.138	
49	35	.0078 "	.01590 "	.01569 "	.03936"	.07872"	.0744 "	.1488 "	.141	
49	36	.0082 "	.01664 "	.0160 "	.0355 "	.078 "	.074 "	.148 "	.139	
49	37	.0083 "	.0174 "	.01675 "	.0383 "	.0786 "	.0719 "	.148 "	.1392	
49	38	.0076 "	.01626 "	.0145 "	.03937"	.0794 "	.0725 "	.1466 "	.134	
49	39	.008244"	.016488"	.0160 "	.038 "	.076 "	.073 "	.14706"	.138	
49	40	.0087 "	.0176 "	.01615 "	.0367 "	.0740 "	.073 "	.146 "	.138	
49	41	.00804 "	.01636 "	.01487 "	.0380 "	.0760 "	.069 "	.1424 "	.138	
49	42	.00840 "	.01680 "	.016185"	.0385 "	.0770 "	.0713 "	.146 "	.124	
49	43	.00739 "	.0156 "	.0153 "	.0362 "	.0752 "	.0732 "	.1464 "	.132	
49	44	.00833 "	.01746 "	.0155 "	.0375 "	.0792 "	.0694 "	.14096"	.1362632"	
49	45	.007090"	.0158 "	.0158 "	.0347 "	.072 "	.072 "	.1502 "	.1213	
49	46	.0083 "	.01730 "	.0156 "	.03706"	.0794 "	.0654 "	.1308 "	.1323 "	
49	47	.00709 "	.01418 "	.0161 "	.0336 "	.0672 "	.0721 "	.1486 "	.136	
49	48	.0083 "	.01728 "	.0154 "	.0377 "	.0762 "	.06405"	.12810"	.1296	
49	49	.0074 "	.0148 "	.0165 "	.0341 "	.0682 "	.070 "	.140 "	.139	
50	1	-	.048 "	.024 "	.05 "	.16 "	.08 "	.346 "	.173	
50	2	.013 "	.048 "	.024 "	.053 "	.188 "	.094 "	.32 "	.18	
50	3	.014 "	.044 "	.022 "	.05 "	.18 "	.099 "	.24 "	.18	
50	4	.014 "	.052 "	.026 "	.052 "	.124 "	.101 "	.22 "	.19	
50	5	.01222 "	.0372 "	.0234 "	.057 "	.128 "	.103 "	.216 "	.185	
50	6	.0122 "	.0288 "	.0228 "	.053 "	.114 "	.1005 "	.218 "	.179	
50	7	.013 "	.0270 "	.021 "	.052 "	.110 "	.0945 "	.2042 "	.18	
50	8	.011 "	.0310 "	.0215 "	.048 "	.112 "	.098 "	.2034 "	.166	
50	9	.0115 "	.0262 "	.0218 "	.051 "	.1036 "	.0878 "	.1892 "	.163	
50	10	.011 "	.02618 "	.0207 "	.049 "	.098 "	.09 "	.192 "	.167	
50	11	.0106 "	.0246 "	.0199 "	.046 "	.098 "	.0895 "	.1790 "	.16	
50	12	.0103 "	.0216 "	.0199 "	.044 "	.096 "	.087 "	.178 "	.162	
50	13	.0109 "	.0238 "	.0186 "	.0436 "	.0890 "	.0807 "	.1766 "	.154	
50	14	.00972 "	.0214 "	.0188 "	.0454 "	.0912 "	.082 "	.164 "	.1468	
50	15	.0100 "	.02092 "	.0182 "	.0438 "	.094 "	.083 "	.166 "	.148	
50	16	.009885"	.0208 "	.01847 "	.0427 "	.0854 "	.076 "	.1734 "	.152	
50	17	.0095 "	.0190 "	.018 "	.040 "	.0920 "	.081 "	.170 "	.1463	
50	18	.0090 "	.0180 "	.01856 "	.0422 "	.088 "	.0793 "	.166 "	.14283	
50	19	.0088 "	.02018 "	.0165 "	.0418 "	.0886 "	.077 "	.1612 "	.1475	
50	20	.0090 "	.018136"	.0177 "	.042 "	.086 "	.0788 "	.1590 "	.147	
50	21	.00841 "	.0190 "	.0177 "	.041 "	.086 "	.0795 "	.1590 "	.150	
50	22	.0080 "	.0188 "	.0178 "	.041 "	.082 "	.0804 "	.1608 "	.145	
50	23	.007947"	.02100 "	.017 "	.0407 "	.0814 "	.0791 "	.1582 "	.143	
50	24	.0081 "	.0192 "	.0169 "	.03943"	.0812 "	.077 "	.1594 "	.142	
50	25	.0085 "	.0170 "	.0178 "	.04045"	.0814 "	.0776 "	.156 "	.141	
50	26	.0087 "	.01846 "	.0165 "	.040 "	.0850 "	.0774 "	.160 "	.1447	

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Raised conditional level of significance for 2x2-tables (Fisher's test).

		Unconditional level of significance (one or two sided) :							
Sample sizes		one s. .005	two s. .01	one s. .01	one s. .025	two s. .05	one s. .05	two s. .10	one s. .10
50	27	.00864 ' "	.01876 "	.01577"	.042 "	.084 "	.0783	.1566	.142
50	28	.00885 "	.0184 ' "	.0172 "	.0386 ' "	.0772 ' "	.0748'	.1496 ' "	.1384
50	29	.00862 "	.0176 "	.017 ' "	.0392 "	.0794 ' "	.077	.154	.141
50	30	.0092 "	.0190 "	.0163 ' "	.0366 ' "	.0810 ' "	.073 ' "	.1478 ' "	.140
50	31	.0082 ' "	.0172 ' "	.01495"	.040 ' "	.080 ' "	.075 ' "	.150 ' "	.139
50	32	.0080 "	.01674 ' "	.0163 ' "	.03731 "	.0784 ' "	.0771"	.1542 "	.144
50	33	.008396'	.016792'	.0163 "	.0404 "	.0820 "	.0744'	.150 ' "	.139
50	34	.0087 ' "	.01764 ' "	.0165 ' "	.03927 ' "	.07854 ' "	.071 ' "	.142 ' "	.145
50	35	.0083 ' "	.0166 ' "	.0168 ' "	.038 ' "	.078 ' "	.0735"	.152 ' "	.138
50	36	.008204"	.01688 "	.01605"	.0382 ' "	.0768 ' "	.0720'	.154	.139
50	37	.00826 ' "	.01652 ' "	.0157 ' "	.0370 "	.0770 ' "	.067 "	.1442 ' "	.138
50	38	.00868 ' "	.01736 ' "	.0165 ' "	.0384 ' "	.0778 ' "	.072	.14698"	.138
50	39	.008035'	.01632 ' "	.01536'	.0389 ' "	.0786 ' "	.0721'	.148	.1357
50	40	.0082 ' "	.0164 ' "	.01593'	.03315 "	.0750 ' "	.072 ' "	.146 ' "	.137
50	41	.0072 ' "	.0178 ' "	.0163 ' "	.03706 ' "	.0760 ' "	.0643	.144	.137
50	42	.00817 ' "	.01646 ' "	.0152 ' "	.038651'	.077302'	.070 ' "	.146 ' "	.137
50	43	.00816 ' "	.01728 ' "	.0166 ' "	.03301 ' "	.07756 ' "	.0715'	.14692'	.1272
50	44	.00788 ' "	.01588 ' "	.01415'	.03728 ' "	.07652 ' "	.0735'	.1470 ' "	.132
50	45	.0086 ' "	.0172 ' "	.0161 ' "	.0385 ' "	.0804 ' "	.0694	.1408 ' "	.1363
50	46	.0076 ' "	.0152 ' "	.01332'	.0355 ' "	.0710 ' "	.073 ' "	.152 ' "	.1236
50	47	.0085 ' "	.01768 ' "	.0156 ' "	.0376 ' "	.07986 ' "	.0666'	.1332 ' "	.1334
50	48	.00753 ' "	.0152 ' "	.01316'	.03473 ' "	.0696 ' "	.0706'	.1496	.136
50	49	.00819 ' "	.0170 ' "	.01548'	.0388 ' "	.07836 ' "	.0658'	.1318 ' "	.130
50	50	.00786 ' "	.01572 ' "	.01362'	.0351	.0702	.071	.142	.136

If the chi-square approx. with correction for continuity is used, the tabulated raised significance levels marked ' (") may cause needless not-rejection (needless not-rejection or unjustified rejection) of the null hypothesis.