

Problems

1. a. 20.77 9.23
24.23 10.77

Only one value had to be computed; the remaining three could be found by subtraction.

- b. 23.77 14.85 12.38
24.23 15.15 12.62

It was necessary to compute two expected values; four were found by subtraction.

- c. 16.85 33.29 22.86
9.23 18.24 12.53
15.92 31.47 21.61

It was necessary to compute four values; five were found by subtraction.

2. a. $\chi^2(1, N = 65) = 13.32, p < .01$.
b. $\chi^2(2, N = 103) = 1.60, p > .05$.
c. $\chi^2(4, N = 182) = 17.77, p < .01$.
3. $\chi^2(1, N = 132) = 11.68, p < .01$. Left-handers were less likely to be aphasic than right-handers.
4. $\chi^2(1, N = 204) = 3.53, p > .05$. Parental alcoholism was not significantly related to alcoholism of the participants in the study.
5. $\chi^2(1, N = 50) = 25.92, p < .01$. The monkey had generalized its learned response from objects to pictures of objects.
6. $\chi^2(2, N = 160) = 1.91, p > .05$. Introversion–extroversion did not affect brand preference.
7. $\chi^2(4, N = 170) = 103.11, p < .01$. The grade assignment significantly departed from a normal distribution.
8. $\chi^2(1, N = 60) = 3.51, p > .05$. High- and low-self-esteem students did not differ on the test of attitudes toward risk taking.
9. $\chi^2(1, N = 28) = 11.57, p < .01$. In physiological psychology, the professor scored significantly better than the departmental average.
10. $\chi^2(1, N = 28) = 2.29, p > .05$. In statistics, the professor did not score better than the departmental average.