

Example of student-collected data for hypothesis 4:

Galls present?	Chewing Damage Present?		Total
	Yes	No	
Yes	16	4	20
No	13	7	20
Total	29	11	40

G-test of independence:

- 1)  $a = 16 \ln 16 + 4 \ln 4 + 13 \ln 13 + 7 \ln 7 = 96.87$
- 2)  $b = 20 \ln 20 + 20 \ln 20 + 29 \ln 29 + 11 \ln 11 = 243.86$
- 3)  $c = 40 \ln 40 = 147.56$
- 4)  $G = 2(a-b+c) = 1.14$

Compare with critical value (alpha .05) of 3.841

Conclusion: do not reject null hypothesis that galls occur independently of chewing damage