

1. This data is showing who survived the sinking of the Titanic based on whether they were crew members, or passengers booked in first-, second-, or third-class staterooms:

	Crew	First	Second	Third	Total
Alive	212	202	118	178	710
Dead	673	123	167	528	1491
Total	885	325	285	706	2201

Is the survival rate of the boat passengers the same across the types of staterooms?

2. Two different teachers teach a stats class. The table shows the distribution of final grades they reported. We wonder whether one of these professors is an “easier” grader.

Grade	Teacher 1	Teacher 2	Total
A	5	9	
B	11	12	
C	14	10	
D	9	8	
F	7	9	
Total			

a. Will you test goodness of fit, homogeneity, or independence? Explain.

b. Determine if one of the teachers is an “easier” grader.

3. A recent study looked into the relationship between political views and opinions about nuclear energy. A survey administered to 100 randomly selected adults asked their political leanings as well as their approval of nuclear energy. The results are below:

	Liberal	Conservative	Independent	TOTAL
Approve	10	15	20	
Disapprove	9	2	16	
No Opinion	8	2	18	
TOTAL				

Do these data provide convincing evidence that political leanings and views on nuclear energy are associated in the larger population of adults from which the sample was selected?

4. In a nationwide telephone poll of 1000 adults representing Democrats, Republicans, and Independents, respondents were asked two questions: their party affiliation and if their confidence in the US banking system had been shaken by the savings and loan crisis. The answers, cross-classified by party affiliation, are given in the following contingency table:

Observed	Yes	No	No Opinion
Democrats	175	220	55
Republicans	150	165	35
Independents	75	105	20

Test the null hypothesis that shaken confidence in the banking system is independent of party affiliation. Use a 10% significance level.