Chi Square

1. The following data concerns the frequency of political party affiliation for male and female individuals. The following data was obtained:

	republican	democrat	other
male	18	43	14
female	39	23	18

Determine whether political affiliation is independent of gender by testing at .05 level of significance.

2. The following data concerns the verdicts of juries for an experiment concerning expert testimony either favorable to the accused, expert testimony unfavorable to the accused, or no expert testimony (control). The possible verdicts for the 90 juries are guilty, not guilty, or hung. Determine if verdict is independent of expert testimony. Test at alpha = .05.

	verdict		
	guilty	not guilty	hung
favorable	7	24	9
unfavorable	12	20	8
control	11	19	10

3. Suppose a poll taken in 1970 revealed the following data regarding the legalization of marijuana: 15% in favor of, 79% against, and 6% no opinion regarding legalization. Suppose you took a random sample of n = 220 people today and obtained the following data:

for	against	no opinion
38	165	17

Is there a significant difference between the current data and what was obtained in 1970? Test at the .05 level of significance.

4. A researcher presented mock juries with a videotaped murder trial simulation. He was researching whether polygraph testimony influences verdicts. He obtained the following data:

	polygraph testimony	no polygraph testimony
guilty	8	6
not guilty	4	6
hung	3	3

Determine whether polygraph testimony is independent of jury verdicts. Test at the .05 level of significance.