Math 45

(1) This table is based on records of accidents compiled by a State Highway Safety and Motor Vehicles Office. The Office wants to decide if people are less likely to have a fatal accident if they are wearing a seatbelt. How can you use the data most convincingly to determine this?

	Nonfatal Injury	Fatal Injury	Row Total
Seat belt	412,368	510	412,878
No seat belt	162,527	1,601	164,128
Column total	574,895	2,111	577,006

(2) Does this data suggest that taking aspirin reduces the risk of heart attack? (This data is from a 5-year experiment with physicians between the ages of 40 and 84, published in 1988 by the Steering Committee of the Physicians Health Study Research Group. The physicians participating in the study were randomly selected to receive an aspirin or a placebo. The pills looked the same and the physicians did not know which they were taking.)

	Heart attack	No heart attack
Aspirin	104	10,933
Placebo	189	10,845

(3) Do angry people have more heart disease? Here are the results from a study designed to investigate this question. 8474 people who had normal blood pressure took the Speilberger Trait Anger Scale Test, which measures how prone a person is to sudden anger. After four years, the researchers determined the number with "coronary heart disease" (CHD), which they defined as the number who suffered a heart attack or needed medical treatment for heart disease. Does this data support the conclusion that "angry people have more heart disease"?

	Low anger	Moderate anger	High anger	Row Total
CHD	53	110	27	190
No CHD	3057	4621	606	8284
Column Total	3110	4731	633	8474