Here is another 2-way table problem that you might want to review for the benchmark.

A survey of cars parked at a local college that contained student and staff automobiles. They were classified by country of origin and owner.

	Student	Staff
American	107	105
European	33	12
Asian	55	47

A) What percent of all the cars surveyed were foreign?

B) What percent of the American cars were owned by students?

C) What percent of the students owned American cars?

D) What is the marginal distribution of origin?

E) What are the conditional distributions of origin by driver classification?

F) Do you think that origin of the car is independent of the type of driver? Explain

Solutions:

A) Foreign cars are "non-American." There are 45+102 =147 non-American cars or 147/359 = 40.95%

B) There are 212 American cars of which 107 were owned by students. 107/212 = 50.47%

C) There are 195 students of whom 107 owned American cars 107/195 = 54.87%

D) American 59.05%, European 12.53%, Asian 28.41%

E) For students the dist. is: American 54.87%, European 16.92%, Asian 28.21%

   For staff the dist. is American 64.02%, European 7.32%, Asian 28.66%

F) No, the marginal distributions look slightly different. Bar charts or pie charts could be used to compare the percentages. There is an especially big difference in American and European cars.