

AP Statistics – Review for Test 1

200 adults shopping at a supermarket were asked about the highest level of education they had completed and whether or not they smoke cigarettes. Results are summarized below:

	Smoker	Non-smoker	Total
High school	32	61	93
Less than 4 years of college	5	17	22
4 or more years of college	13	72	85
Total	50	150	200

1. What percent of the shoppers were smokers with only high school educations?
 2. What percent of the shoppers with only high school educations were smokers?
 3. What percent of the smokers had only high school educations?
 4. Do the data suggest that educational attainment and smoking are independent? Why or why not? Create a graph that illustrates your argument (pie chart, bar chart, ribbon chart).
 5. What is the marginal distribution of the education level of the shoppers?
 6. What is the marginal distribution of the smoking habits of the shoppers?
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Students were surveyed to see how they got to school. The results are shown below:

	Male	Female	Total
Bus	30	34	64
Car	37	45	82
Other	19	23	42
Total	86	102	188

1. How many students were surveyed?
2. What are the two variables here?
3. What percentage of students ride the bus?
4. What percentage of girls ride the bus?
5. What is the marginal distribution of gender?
6. Is the mode of transportation independent of gender? Why or why not?