10. Test statistic: $\chi^2 = 4.600$. Critical value: $\chi^2 = 7.815$. (Tech: P-value = 0.2035.) There is not sufficient evidence to warrant rejection of the claim that the generated digits are equally likely. Students do not have the ability to select the same tire.
11. Test statistic: $\chi^2 = 30.017$. Critical value: $\chi^2 = 12.592$. (Tech: P-value = 0.0000.) There is sufficient evidence to warrant rejection of the claim that the car crash fatalities occur with equal frequency on the different days of the week. Drinking on Friday night might be a cause of an exceptionally large number of deaths on early Saturday morning.
12. Test statistic: $\chi^2 = 9.472$. Critical value: $\chi^2 = 12.592$. (Tech: P-value = 0.1487.) There is not sufficient evidence to warrant rejection of the claim that births occur with equal frequency on the different days of the week. Lower frequencies on Saturday and Sunday might be the result of induced births scheduled on business days.
13. Test statistic: $\chi^2 = 47.200$. Critical value: $\chi^2 = 19.675$. (Tech: P-value = 0.0000.) There is sufficient evidence to warrant rejection of the claim that motorcycle fatalities occur with equal frequencies in the different months. Fatalities might be lower in winter months when colder weather is associated with substantially less use of motorcycles.
14. Test statistic: $\chi^2 = 7.226$. Critical value: $\chi^2 = 5.991$ (assuming a 0.05 significance level). (Tech: P-value = 0.0270.) There is sufficient evidence to support the claim that the "A" students are not evenly distributed throughout the classroom.

10. Flat Tire and Missed Class A classic tale involves four car-pooling students who missed a test and gave as an excuse a flat tire. On the makeup test, the instructor asked the students to identify the particular tire that went flat. If they really didn't have a flat tire, would they be able to identify the same tire? The author asked 41 other students to identify the tire they would select. The results are listed in the following table (except for one student who selected the spare). Use a 0.05 significance level to test the author's claim that the results fit a uniform distribution. What does the result suggest about the ability of the four students to select the same tire when they really didn't have a flat?

Tire	Left front	Right front	Left rear	Right rear
Number selected	11	15	8	6

11. Deaths from Car Crashes Randomly selected deaths from car crashes were obtained, and the results are included in the table below (based on data from the Insurance Institute for Highway Safety). Use a 0.05 significance level to test the claim that car crash fatalities occur with equal frequency on the different days of the week. How might the results be explained? Why does there appear to be an exceptionally large number of car crash fatalities on Saturday?

Day	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
Number of fatalities	132	98	95	98	105	133	158

Based on data from the Insurance Institute for Highway Safety.

12. Births Randomly selected birth records were obtained and results are listed in the table below (based on data from the *National Vital Statistics Report*, Vol. 49, No. 1). Use a 0.05 significance level to test the reasonable claim that births occur with equal frequency on the different days of the week. How might the apparent lower frequencies on Saturday and Sunday be explained?

Day	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
Births	36	55	62	60	60	58	48

13. Motorcycle Deaths Randomly selected deaths of motorcycle riders are summarized in the table below (based on data from the Insurance Institute for Highway Safety). Use a 0.05 significance level to test the claim that such fatalities occur with equal frequency in the different months. How might the results be explained?

Month	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Number	6	8	10	16	22	28	24	28	26	14	10	8

14. Grade and Seating Location Do "A" students tend to sit in a particular part of the classroom? The author recorded the locations of the students who received grades of A, with these results: 17 sat in the front, 9 sat in the middle, and 5 sat in the back of the classroom. Is there sufficient evidence to support the claim that the "A" students are not evenly distributed throughout the classroom? If so, does that mean you can increase your likelihood of getting an A by sitting in the front?