

American, Alaska Airlines, and Northwest. Use a 0.01 significance level to test the claim that flights scheduled one day in advance cost more than flights scheduled 30 days in advance. What strategy appears to be effective in saving money when flying?

Flight scheduled one day in advance	456	614	628	1088	943	567	536
Flight scheduled 30 days in advance	244	260	264	264	278	318	280

5. Self-Reported and Measured Female Heights As part of the National Health and Nutrition Examination Survey conducted by the Department of Health and Human Services, self-reported heights and measured heights were obtained for females aged 12 to 16. Listed below are sample results. Is there sufficient evidence to support the claim that there is a difference between self-reported heights and measured heights of females aged 12 to 16? Use a 0.05 significance level.

Reported height	53	64	61	66	64	65	68	63
Measured height	58.1	62.7	61.1	64.8	63.2	66.4	67.6	63.5

6. Eyewitness Accuracy of Police Does stress affect the recall ability of police eyewitnesses? This issue was studied in an experiment that tested eyewitness memory a week after a nonstressful interrogation of a cooperative suspect and a stressful interrogation of an uncooperative and belligerent suspect. The numbers of details recalled a week after the incident were recorded, and the summary statistics are given below (based on data from "Eyewitness Memory of Police Trainees for Realistic Role Plays," by Yuille et al., *Journal of Applied Psychology*, Vol. 79, No. 6). Use a 0.01 significance level to test the claim in the article that "stress decreases the amount recalled."

$$\text{Nonstress: } n = 40, \bar{x} = 53.3, s = 11.6$$

$$\text{Stress: } n = 40, \bar{x} = 45.3, s = 13.2$$

7. Eyewitness Accuracy of Police Construct a confidence interval suitable for testing the claim from Exercise 6. What feature of the resulting confidence interval leads to the same conclusion from Exercise 6?

8. Effect of Blinding Among 13,200 submitted abstracts that were blindly evaluated (with authors and institutions not identified), 26.7% were accepted for publication. Among 13,433 abstracts that were not blindly evaluated, 29.0% were accepted (based on data from "Effect of Blinded Peer Review on Abstract Acceptance," by Ross, et al., *Journal of the American Medical Association*, Vol. 295, No. 14). Use a 0.01 significance level to test the claim that the acceptance rate is the same with or without blinding. How might the results be explained?

9. Comparing Means The *baseline characteristics* of different treatment groups are often included in journal articles. In one study, 49 subjects treated with raw garlic had LDL cholesterol measurements with a mean of 151 and a standard deviation of 15, while 48 subjects given placebos had LDL cholesterol measurements with a mean of 149 and a standard deviation of 14 (based on data from "Effect of Raw Garlic vs Commercial Garlic Supplements on Plasma Lipid Concentrations in Adults with Moderate Hypercholesterolemia," by Gardner et al., *Archives of Internal Medicine*, Vol. 167). Use a 0.05 significance level to test the claim that there is no difference between the mean LDL cholesterol levels of subjects treated with raw garlic and subjects given placebos. Do both groups appear to be about the same?

10. Comparing Variation Use the sample data from Exercise 9 to test the claim that the two populations have LDL levels with the same standard deviation. Use a 0.05 significance level.