

 **22. Brain Volume** Listed below are brain volumes (cm^3) of unrelated subjects used in a study. (See Data Set 6 in Appendix B.) Use a 0.01 significance level to test the claim that the population of brain volumes has a mean equal to 1100.0 cm^3 .

963 1027 1272 1079 1070 1173 1067 1347 1100 1204

11KEM100

 **14. Gender Selection** The Genetics & IVF Institute conducted a clinical trial of the YSORT method designed to increase the probability of conceiving a boy. As of this writing, 291 babies were born to parents using the YSORT method, and 239 of them were boys. Use a 0.01 significance level to test the claim that the YSORT method is effective in increasing the likelihood that a baby will be a boy.

 **21. Lead in Medicine** Listed below are the lead concentrations (in $\mu\text{g/g}$) measured in different Ayurveda medicines. Ayurveda is a traditional medical system commonly used in India. The lead concentrations listed here are from medicines manufactured in the United States. The data are based on the article "Lead, Mercury, and Arsenic in US and Indian Manufactured Ayurvedic Medicines Sold via the Internet," by Saper et al., *Journal of the American Medical Association*, Vol. 300, No. 8. Use a 0.05 significance level to test the claim that the mean lead concentration for all such medicines is less than $14 \mu\text{g/g}$.

3.0 6.5 6.0 5.5 20.5 7.5 12.0 20.5 11.5 17.5