14. From a 3M Privacy Filters poll in which respondents were asked to identify their favorite seat when they fly: $n = 806$, $x = 492$ who chose the window seat. Use a 99% confidence level.

15. From a Prince Market Research poll in which respondents were asked if they acted to annoy a bad driver: $n = 2518$, $x = 1083$ who said that they honked. Use a 90% confidence level.

16. From an Angus Reid Public Opinion poll in which respondents were asked if they felt that U.S. nuclear weapons made them feel safer: $n = 1005$, $x = 543$ who said "yes." Use a confidence level of 80%.

17. Gender Selection The Genetics and IVF Institute conducted a clinical trial of the XSORT method designed to increase the probability of conceiving a girl. As of this writing, 945 babies were born to parents using the XSORT method, and 879 of them were girls.

a. What is the best point estimate of the population proportion of girls born to parents using the XSORT method?

b. Use the sample data to construct a 95% confidence interval estimate of the proportion of girls born to parents using the XSORT method.

c. Based on the results, does the XSORT method appear to be effective? Why or why not?

18. Gender Selection The Genetics and 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.

a. What is the best point estimate of the population proportion of boys born to parents using the YSORT method?

b. Use the sample data to construct a 99% confidence interval estimate of the proportion of boys born to parents using the YSORT method.

c. Based on the results, does the YSORT method appear to be effective? Why or why not?

19. Touch Therapy When she was 9 years of age, Emily Rosa did a science fair experiment in which she tested professional touch therapists to see if they could sense her energy field. She flipped a coin to select either her right hand or her left hand, then she asked the therapists to identify the selected hand by placing their hand just under Emily's hand without seeing it and without touching it. Among 280 trials, the touch therapists were correct 123 times (based on data in "A Close Look at Therapeutic Touch," *Journal of the American Medical Association,* Vol. 279, No. 13).

a. Given that Emily used a coin toss to select either her right hand or her left hand, what proportion of correct responses would be expected if the touch therapists made random guesses?

b. Using Emily's sample results, what is the best point estimate of the therapist's success rate?

c. Using Emily's sample results, construct a 99% confidence interval estimate of the proportion of correct responses made by touch therapists.

d. What do the results suggest about the ability of touch therapists to select the correct hand by sensing an energy field?