

PROBLEM SOLVING

EXAMPLES 2 and 3

on p. 872
for Exs. 13–16

In Exercises 13 and 14, explain why the question is biased. Then rewrite it so that it is not.

13. Don't you agree that the school needs a new athletic field more than a new science lab?

TEXAS @HomeTutor for problem solving help at classzone.com

14. Would you pay even higher concert ticket prices to finance a new arena?

TEXAS @HomeTutor for problem solving help at classzone.com

15. **BASEBALL** Every Major League Baseball (MLB) season, players are chosen to represent the two leagues in an All-Star game. At each MLB park, fans are given ballots to vote for their favorite players. Are the ballots collected at the Chicago Cubs' park, Wrigley Field, necessarily representative of the opinions of all Chicago Cubs fans? *Explain.*



16. **WATER SAMPLING** Scientists designed a project in which students performed tests on local water sources each day. Students from 18 countries participated in the project. The results of the survey were used to assess the quality of the world's fresh water. Is the sample likely to be biased? *Explain.*

17. **TEXAS TAKS REASONING** You plan to report on the academic performance of students in your school for your school newspaper.

- Describe how you could choose a representative sample.
- Write an unbiased question you could use to collect information on how many hours per night a student studies. *Explain* why your question is unbiased.

18. **CHALLENGE** A systematic sample of a population is used for a survey containing unbiased questions. *Explain* how it is possible for the survey to be biased. *Describe* a situation in which this might occur.



MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

REVIEW

Lesson 13.3;
TAKS Workbook

19. **TEXAS TAKS PRACTICE** Joe has a blue number cube and a red number cube. If Joe tosses both cubes, what is the probability that he will get a 3 on the blue cube and an even number on the red cube? **TAKS Obj. 9**

(A) $\frac{1}{12}$

(B) $\frac{1}{3}$

(C) $\frac{1}{2}$

(D) $\frac{2}{3}$

20. **TEXAS TAKS PRACTICE** A salesperson knows that about 20% of his conversations with customers will result in a sale. Last week he made 26 sales. About how many customers did he speak with last week? **TAKS Obj. 9**

(F) 5

(G) 74

(H) 130

(J) 220

