

9-6 Using Statistics to Predict (Pages 454–457)

You can use information about a sample from a larger group to predict something about the larger group.

Choosing a Sample	When you take a survey and use the results to predict something about a larger population, be sure that your sample is random and large enough to represent the population. A sample that is too small may give responses that are not typical of the larger population.
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EXAMPLES

A For the data table in PRACTICE, what percent of the students preferred an open campus?

Add to find the total number of students surveyed.
 $752 + 122 + 58 = 932$
Divide 752 by 932 to find the percent of students who preferred an open campus.
 $752 \div 932 = \text{about } 0.81$
 So about 81% of the students preferred an open campus.

B Use the data table in PRACTICE. In a typical class of 25 students, how many would you expect to be in favor of an open campus at lunch?

Use the percent from Example A.
 $81\% \text{ of } 25 = 0.81 \cdot 25$
 $= 20.25$
 So you would expect about 20 students to be in favor of an open campus at lunch.

PRACTICE

Students at a high school took a poll to find out the opinions of parents and students about having an open or closed campus at lunch.

Students		
Open Campus	Closed Campus	No Opinion
752	122	58

Parents		
Open Campus	Closed Campus	No Opinion
320	445	14

- What percent of the students had no opinion?
- What percent of the parents preferred an open campus?
- What percent of the parents preferred a closed campus?
- There were 135 parents at a parent/teacher meeting on the open campus issue. How many of the parents would you expect to favor a closed campus at lunch?
- Hotel Management** A hotel has a checkout time of 1 P.M. Last week, 150 rooms were vacated between early morning and 11 A.M., 124 rooms between 11 A.M. and 12 noon, and 167 rooms between 12 noon and 1 P.M. If 74 rooms are scheduled to be vacated today, how many would you expect to be vacated between 12 noon and 1 P.M.?



6. Standardized Test Practice Art surveyed fourteen of his friends and found that eleven of them chose rock as their favorite type of music. What percent chose rock as their favorite?

- A** 77% **B** 78% **C** 79% **D** 80%

Answers: 1. 6% 2. 41% 3. 57% 4. 77 parents 5. 28 rooms 6. C
