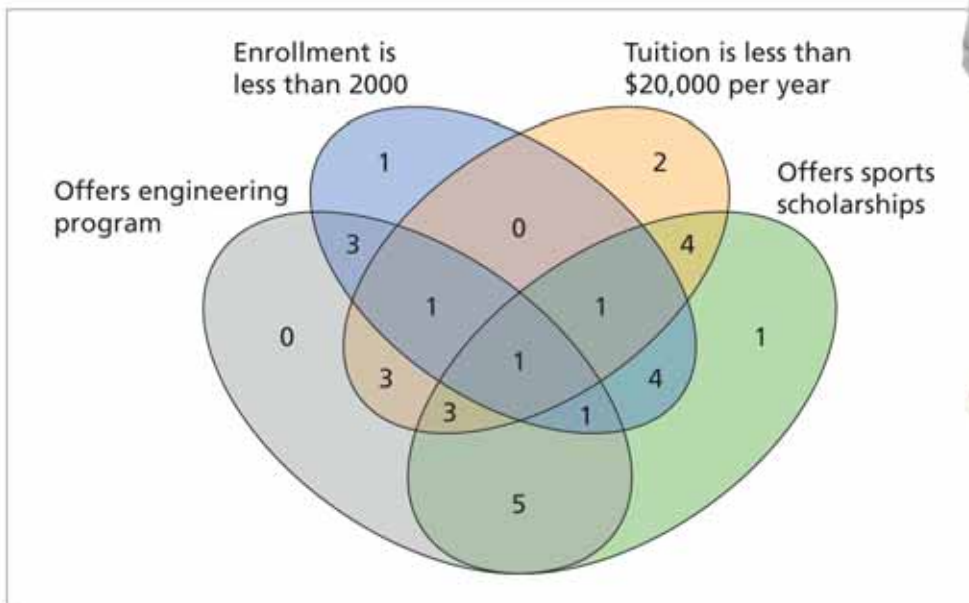# 3.1 Exercises

College Testing **In Exercises 1 and 2, use the information below.** *(See Example 1.)*

In a high school graduating class, 128 students took the SAT, 100 students took the ACT, and 98 students took *both* the SAT and the ACT.

1. Draw a set diagram that shows the information.

2. How many students took the SAT *or* the ACT?

Colleges **The set diagram shows characteristics of colleges that a high school senior is considering. In Exercises 3–8, use the set diagram.** *(See Example 2.)*

3. How many of the colleges offer an engineering program?

4. How many of the colleges offer sports scholarships *or* an engineering program?

5. How many of the colleges offer sports scholarships *and* have an enrollment less than 2000?

6. How many of the colleges have tuition less than $20,000 per year, offer an engineering program, *and* offer sports scholarships?

7. Use the set diagram to determine whether colleges with an enrollment less than 2000 are likely to have tuitions less than $20,000 per year. Explain why the answer is reasonable in real life.

8. List three characteristics of a college that are important to you. Research 20 colleges to determine whether each college meets your desired characteristics. Create a set diagram of the results.