4.4 Venn Diagram Practice

1. A 2013 survey suggests that 76% of U.S. teenagers use Facebook, 24% use Twitter, and 15% do both. Suppose we select a U.S. teenager at random and learn that the student uses Facebook. Find the probability that the student uses Twitter.

   a. Make a Venn diagram or table to model the situation.

   b. Find the probability that the student uses Facebook or Twitter.

   c. Given the student uses Facebook, what is the probability that they use Twitter?

2. A recent census at a major university revealed that 60% of its students mainly used Macintosh computers (Macs) and 80% used PCs. In the census, 43% used both types of computers. Suppose we select a student at random from among those polled.

   a. Make a Venn diagram or table to model the situation.

   b. Find the probability that a person uses a Mac and not a PC.

   c. What is the probability that a student does not use a Mac or a PC?

   d. Given the student does use a computer, what is the probability that they use a PC?