

Collecting Your Own Data

Survey the students in your class to see how many have ever been to an Orioles game and how many have been to a Ravens game. Record the numbers in the following table. For example, if a student has never been to a Ravens game but has been to an Orioles game, make a tally mark in the top right box of the table.

		Have you ever been to a Ravens game?	
		Yes	No
Have you ever been to an Orioles game?	Yes		
	No		

Because the information above was not gathered using simple random sampling techniques, the results of your data collection will *not* be representative of the entire student body. However, for the sake of this exercise, assume that the data was collected from a simple random sample of students in your school.

Suppose another student is randomly selected from the student body. Use the results of the survey to find the following probabilities.

1. Based on your survey, what is the probability that the student has been to an Orioles game?
2. Based on your survey, what is the probability that the student has been to a Ravens game?
3. Based on your survey, what is the probability that the student has been to both an Oriole and a Ravens game?
4. Consider a group of 100 students (selected randomly) from your school whom you did not interview.
 - a. How many students would you predict have *not* been to an Orioles game? Use mathematics to explain how you determined your answer. Use words, symbols, or both in your explanation.
 - b. How many students would you predict have *not* been to a Ravens game? Use mathematics to explain how you determined your answer. Use words, symbols, or both in your explanation.

Collecting Your Own Data Answer Key

Answers for this activity will vary. Consider the sample results below.

Have you ever been to a
Ravens' game?

		Yes	No
Have you ever been to an Orioles' game?	Yes	5	13
	No	5	7

- Answers will vary. For the sample results above: $\frac{18}{30} = 0.60$.
- Answers will vary. For the sample results above: $\frac{10}{30} = 0.333$.
- Answers will vary. For the sample results above: $\frac{5}{30} = 0.167$.
- Answers will vary. For the sample results above: $\frac{12}{30}(100) = 40$.
 - Answers will vary. For the sample results above: $\frac{20}{30}(100) = 66.6$ or approximately 67.