

Drawing Conclusions about a Population Notes

Name _____

When you have a **good representative sample**, you can use the data collected to draw inferences about the entire population. This is important because it is nearly impossible to survey an entire population when a survey is being completed.

Use the data from the survey to answer the following questions. Assume the sampling methods were good.

- 1) Your school cafeteria is going to make some changes to the menu. They ask 150 students if they would like to have pizza as an option every day. One hundred five students answered, "Yes." If the school has 900 students, how many would you expect to answer "Yes" if asked the same question?

- 2) Your PTA is going to pay for a cultural arts assembly. They ask 200 students what kind of assembly they would prefer. Seventy-five asked for a speaker, fifty-eight asked for an animal show, and the rest said that they would prefer an acrobatic show. If there are 1100 students in the school, about how many would you expect to want to see an animal show?

- 3) A team of researchers want to study the travel patterns of squirrels. They capture and tag 150 squirrels with a tracking device. Over the next 6-months, they collect data off of the tracking devices. Half of the squirrels keep within 10 miles of the area where they were tagged. Fifty squirrels travel within 15 miles, and the remaining twenty-five travel over 20 miles from where they were tagged. Based on this data, how many squirrels would you expect to travel over 20 miles in a population of 1,100 squirrels.



Pause the video and try these problems on your own!
Then press play and check your answers with a color pen.

- 1) Your school is going to buy some new physical education equipment. Of a survey of 225 students, one-hundred students would like new basketballs, seventy-five would like new hockey equipment, and the remaining would like new footballs. Based on this data, how many students would you expect to like new basketballs in a school of 1,000 students?

- 2) Your school cafeteria is going to look at adding a salad bar to the lunch line. Of the 200 students they surveyed, 125 students said that they liked that idea. If the school has 1300 students, about how many would you expect to like the idea of a salad bar?