

MAT 223, Discussion Questions 8.24

1. What is the difference between a population and a sample?

a population is the group we would like to learn about (think big!); the sample is the subset of the population we can learn about.

2. A psychologist wants to know if adults with normal vision can be fooled by a certain optical illusion. She recruits 50 students from her PSY 120 class and finds that 42 of them are fooled by the illusion.

- a. The population for this study is what?

adults of normal vision

- b. The sample for this study is what?

50 students in PSY 120

3. What is the difference between a parameter and a statistic?

a parameter is a characteristic of a population while a statistic is a characteristic of a sample (which is used to estimate the parameter)

4. The student newspaper runs a weekly question that readers can answer online or by campus mail. One question was "Do you think the college is doing enough to provide student parking?" Of the 82 people who responded, 79% said "No."

- a. What is the parameter being measured in this study?

the proportion of the student body who think the college is not doing enough to provide student parking — or more broadly — the attitude of students toward student parking on campus.

b. What is the statistic in this study?

79% said "No" not enough is being done
for student parking

5. What is the difference between a descriptive statistic and an inferential statistic?

a descriptive statistic is calculated from a sample and it just describes that sample. an inferential statistic may come from the same source but we use it to infer information about the general population, even though they may not all have been included in the sample.