

1. The Environmental Protection Agency (EPA) uses a few new automobiles of each model every year to collect data on gasoline mileage performance. For the 2017 Honda Accord model, they selected a sample of 16 cars and determined their average fuel efficiency to be 32.2 miles per gallon.
  - (a) What is the **population of interest** in this study?
  - (b) Is the average fuel efficiency of 32.2 miles per gallon a statistic or a parameter? **Why?**
2. A student engagement committee at Clemson decides to conduct a survey to learn about how students are involved in campus clubs and organizations. The committee randomly selects 125 students and finds that 73% report being involved in at least one club or organization on campus.
  - (a) Identify the **sample** in this situation.
  - (b) Describe the **population** in this situation.
  - (c) Identify the **statistic** in this study.
  - (d) Describe the **parameter** in this study.
3. Identify the goal of each of the following as either **descriptive** or **inferential** statistics. Describe **why** you give your answer.
  - (a) A researcher wants to study the exercise habits of residents in Pickens County. She randomly selects a sample of residents using phone book listings and conducts short phone interviews with 203 residents who answer the phone, asking them about their weekly exercise routine. She finds that 62% of residents in Pickens County exercise 2-3 times per week.
  - (b) The owner of a small start-up business with 19 employees asks each of them to submit a timesheet logging their hours worked per day. He finds that, in the last week, the employees at his business worked an average of 9.5 hours per day.