

Lesson Summary

Statistics is about using data to answer questions. In this module, the following four steps summarize your work with data:

Step 1: Pose a question that can be answered by data.

Step 2: Determine a plan to collect the data.

Step 3: Summarize the data with graphs and numerical summaries.

Step 4: Answer the question posed in Step 1 using the data and summaries.

A statistical question is one that can be answered by collecting data and where there will be variability in the data.

Two types of data are used to answer statistical questions: numerical and categorical.

Problem Set

1. For each of the following, determine whether the question is a statistical question. Give a reason for your answer.
 - a. How many letters are in my last name?
 - b. How many letters are in the last names of the students in my sixth-grade class?
 - c. What are the colors of the shoes worn by students in my school?
 - d. What is the maximum number of feet that roller coasters drop during a ride?
 - e. What are the heart rates of students in a sixth-grade class?
 - f. How many hours of sleep per night do sixth graders usually get when they have school the next day?
 - g. How many miles per gallon do compact cars get?
2. Identify each of the following data sets as categorical (C) or numerical (N). Explain your answer.
 - a. Arm spans of 12 sixth graders
 - b. Number of languages spoken by each of 20 adults
 - c. Favorite sport of each person in a group of 20 adults
 - d. Number of pets for each of 40 third graders
 - e. Number of hours a week spent reading a book for a group of middle school students
3. Rewrite each of the following questions as a statistical question.
 - a. How many pets does your teacher have?
 - b. How many points did the high school soccer team score in its last game?
 - c. How many pages are in our math book?
 - d. Can I do a handstand?

4. Write a statistical question that would be answered by collecting data from the sixth graders in your classroom.
5. Are the data you would collect to answer the question you wrote in Problem 2 categorical or numerical? Explain your answer.