

Problem Set

1. The suggestions below for how to choose a random sample of students at your school were made and vetoed. Explain why you think each was vetoed.
 - a. Use every fifth person you see in the hallway before class starts.
 - b. Use all of the students taking math the same time that your class meets.
 - c. Have students who come to school early do the activity before school starts.
 - d. Have everyone in the class find two friends to be in the sample.
2. A teacher decided to collect homework from a random sample of her students rather than grading every paper every day.
 - a. Describe how she might choose a random sample of five students from her class of 35 students.
 - b. Suppose every day for 75 days throughout an entire semester she chooses a random sample of five students. Do you think some students will never get selected? Why or why not?
3. Think back to earlier lessons in which you chose a random sample. Describe how you could have used a random number generator to select a random sample in each case.
 - a. A random sample of the words in the poem “Casey at the Bat”
 - b. A random sample of the grocery prices on a weekly flyer
4. Sofia decided to use a different plan for selecting a random sample of books from the population of 150 top-selling children’s books from Example 2. She generated ten random numbers between 1 and 100,000 to stand for the possible number of pages in any of the books. Then, she found the books that had the number of pages specified in the sample. What would you say to Sofia?
5. Find an example from a newspaper, a magazine, or another source that used a sample. Describe the population, the sample, the sample statistic, how you think the sample might have been chosen, and whether or not you think the sample was random.