

Introduction to Statistics Worksheet

I. Populations and Samples

1. Of the U.S. adult population, 36% has an allergy. A sample of 1200 randomly selected adults resulted in 33.2% reporting an allergy.

- Describe the population.
- What is the sample?
- Identify the statistic and give its value.
- Identify the parameter and give its value.

Determine whether the following represents a population or a sample.

- A school lunch survey that asks every fifth student that enters the lunch room.
- A list of the test scores of all the students in a school.
- The salaries of employees at Wexler's Office Supplies.
- A survey of 728 random people found that 72% prefer comedies when going to the movies.

II. Determining the best sample.

You want to estimate the number of students in a middle school who ride the bus. Which sample is best?

- 7 students in the hallway
- All students in the band
- 50 8th graders at random
- 100 students during the lunch periods

III. Random Samples

State whether or not the sample is random. If it is not random, explain why.

1. You survey customers at a mall. You want to know which stores they shop at the most. You walk around a computer shop and choose 20 customers there for your survey.

2. A country radio station wants to know what the most popular type of music is, so they ask their listeners to call in to say their favorite type.

3. You want to know what 7th graders think of their science class. You poll 100 random 7th graders.

4. You want to survey the students in your school about their exercise habits. At lunchtime you stand by a vending machine. You survey every student who buys something from the vending machine.

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IV. Making predictions from a sample

A counselor surveys a random sample of 60 out of 900 high school students. 75% of them said they were going to college. She used these results to determine that 675 students in the overall school would be planning to go to college. Do you agree with her prediction?