

1.4.5: Sampling Demonstration

Learning Objectives

- Distinguish between simple random sampling and stratified sampling.
- Describe how often random and stratified sampling give exactly the same result.

Review of Sampling

Instructions

The sampling simulation uses a population of 100 animals: 60 lions, 30 turtles, 10 rabbits.

Options

☒ **Random Sample:** This option allows you to draw a sample of 10 animals at a time with each animal having an equal chance of being selected.

☐ **Stratified Sample:** This option allows you to draw a sample of 10 animals at a time, with each number of animals from a group being proportional to their group's size of the population.

Simulation Results

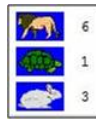


Figure 1.4.5.1: Simulation Results

The number of animals chosen from each group when a sample is drawn is shown next to the picture of the animal.

When you give it a try

Random Sampling

- Begin by leaving the ☒ **Random Sample** option selected.
- Click on the button, 10 animals will be selected out of the population.

Note: The animals become highlighted in blue and a number count of each animal selected will be listed by each animal image.

- Each time you push the button, another sample will be drawn and the new tally will be shown on the right side of the previous sample.
- You should get different tally results for each animal as you select , however the computer may give you the same number drawn from an animal category every now and then.

Stratified Sample

Note: Your animals should become highlighted in blue and a number count should be listed by each animal image.

- Click on the button, to clear the simulation.
- Select the ☐ **Stratified Sample** option.
- Click on the button a few times.
- As you get a new tally for every button, notice that the number of animals stays the same, but the animals selected are not always the same animals.

Illustrated Instructions

The opening screen of the sampling simulation displays all 100 animals in the population. You can select between a random sample and a stratified sample directly below the population and then generate a sample of ten animals.

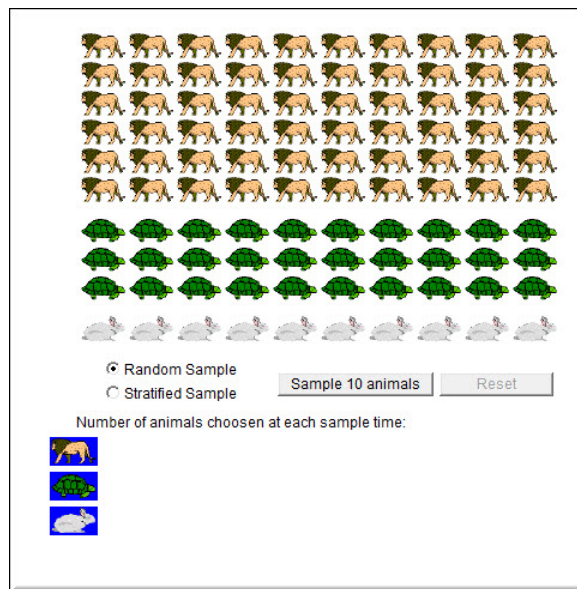


Figure 1.4.5.2: Sample Choices

Below is an example of a random sample. Notice that animals selected are highlighted in the population and the total number of animals selected from each category is listed at the bottom of the simulation.



Figure 1.4.5.3: Random Sample

This page titled [1.4.5: Sampling Demonstration](#) is shared under a [Public Domain](#) license and was authored, remixed, and/or curated by [David Lane](#) via [source content](#) that was edited to the style and standards of the LibreTexts platform.

- **1.5: Sampling Demonstration** by [David Lane](#) is licensed [Public Domain](#). Original source: <https://onlinestatbook.com>.