

Investigation 16: Too Many Peanuts?

Worksheet 16.2 StatKey Directions

Steps to construct a sampling distribution of sample proportions based on sample size of 258 and a population proportion of 50%.

<http://www.lock5stat.com/StatKey/>

1. Select Sampling Distributions – Proportion

StatKey

to accompany *Statistics: Unlocking the Power of Data*
by Lock, Lock, Lock, Lock, and Lock

Descriptive Statistics and Graphs	Bootstrap Confidence Intervals	Randomization Hypothesis Tests
One Quantitative Variable	CI for Single Mean, Median, St.Dev.	Test for Single Mean
One Categorical Variable	CI for Single Proportion	Test for Single Proportion
One Quantitative and One Categorical Variable	CI for Difference In Means	Test for Difference in Means
Two Categorical Variables	CI for Difference In Proportions	Test for Difference In Proportions
Two Quantitative Variables	CI for Slope, Correlation	Test for Slope, Correlation

Sampling Distributions	Mean	Proportion
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2. Select Edit Proportion

StatKey

Sampling Distribution for a Proportion

College Graduates ▼

Edit Proportion

Edit Data

Choose samples of size $n =$ 200

Generate 1 Sample

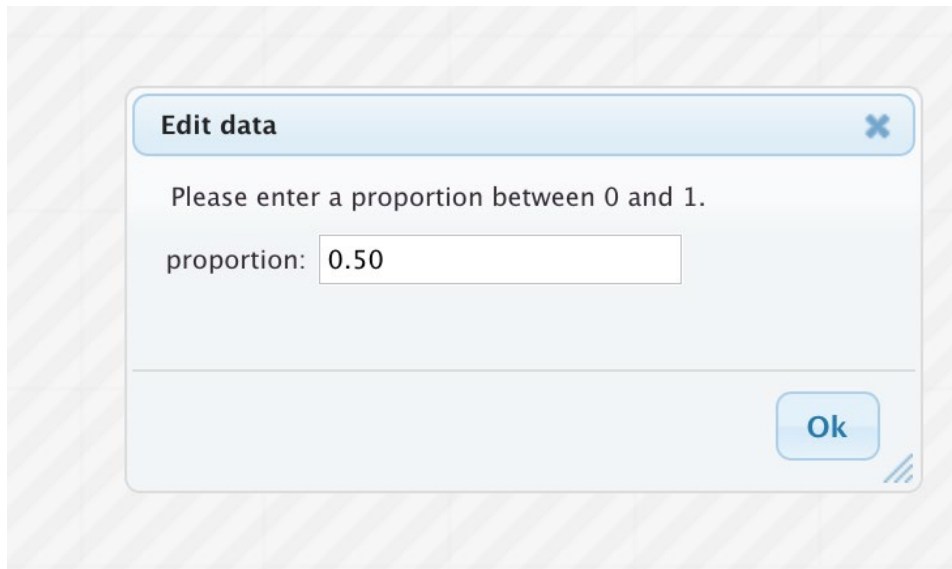
Generate 10 Samples

Generate 100 Samples

Generate 1000 Samples

Reset Plot

3. Enter 0.50 and click OK



The image shows a screenshot of a software interface with a light gray grid background. In the center is a white dialog box with a light blue header bar. The header bar contains the text 'Edit data' on the left and a blue 'X' icon on the right. Below the header, the text 'Please enter a proportion between 0 and 1.' is displayed. Underneath this text, the label 'proportion:' is followed by a white text input field containing the value '0.50'. At the bottom right of the dialog box is a blue button with the text 'Ok' in white. A small blue icon consisting of three diagonal lines is located at the bottom right corner of the dialog box.

4. Enter 258 for samples of size n .
5. Generate 100 samples twice for a total of 200 samples.
6. Count the number of sample proportions that are 0.55 and greater.