Lesson 16: Describing Categorical Data; Proportions; Sampling Distribtion of a Sample Proportion

Homework

## Solutions

**Please note that the steps show rounded numbers, but that the final answers to the problems are calculated without rounding.**

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| Problem | Part | Solution |
| 1 | - | A pie chart is used for categorical data. Each slice represents a part of a whole. A histogram, on the other hand, is used for quantitative data. It is a visual representation of the spread of a set of data. |
| 2 | - | pieSurveyData |
| 3 | - | barSurveyData |
| 4 | - | paretoSurveyData |
| 5 | - | The sample proportion will be approximately normal when is large. How do we know if is large? We will conclude that is large when and |
| 6 | - | n = 100 |
| 7 | - | The sample proportion will be approximately normal when:  and   and  Since both conditions are true, we conclude that is sufficiently large so that will be approximately distributed. |
| 8 | - | The sampling distribution of is approximately normal with mean and . |
| 9 | - |  |
| 10 | - |  |
| 11 | - | The sample proportion will be approximately normal when:  and   and  Since both conditions are true, we conclude that is sufficiently large so that will be approximately distributed. |
| 12 | - | The sampling distribution of is approximately normal with mean and . |
| 13 | - |  |