

Quantitative Methods

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1.1.4 Build Expressions from Word Phrases

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5.1.1 Exponential Functions

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5.2.2 Writing Exponential Statements as Logarithmic Statements

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6.1.1 Simple Interest

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6.3.3 Future Value (Payment Made at the Beginning of Period)

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- 8.2.1 Formulating Word Problems Into LPP
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Chapter 9: Introduction to Statistics and Organization of Data

9.1 Introduction to Statistics

- 9.1.1 Define statistics.
- 9.1.2 Explain the use of statistics in various diverse fields.
- 9.1.3 Understand the limitations of statistics.
- 9.1.4 Know about the abuse or distrust of statistics.

9.2 Collection of Data

- 9.2.1 Identify Sources of Data
- 9.2.2 Select a random sample from a small population.
- 9.2.3 Select a random sample from a large population by the use of random number tables.

9.3 Frequency Distribution of Quantitative Data

- 9.3.1 Organize small data sets in the form of frequency distributions
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- 9.3.3 Construct stem-and leaf diagrams
- 9.3.4 Interpret stem-and leaf diagrams

9.4 Frequency Distribution of Qualitative Data

- 9.4.1 Frequency distribution for Nominal Data
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9.5 Alternate Forms of Frequency Distribution

- 9.5.1 Construct a cumulative frequency distribution
- 9.5.2 Construct a relative frequency distribution

9.6 Graphs of Frequency Distributions

- 9.6.1 Histogram of continuous data
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- 9.6.3 Cumulative frequency histogram
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9.7 Frequency Polygons and Curves

- 9.7.1 Frequency or density polygon
- 9.7.2 Frequency curve
- 9.7.3 Cumulative frequency polygon
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9.8 Graphical Presentation Of Qualitative Data

- 9.8.1 Construct a bar chart
- 9.8.2 Make a pie chart

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10.1 Measures of Central Tendency (Raw Data)

- 10.1.1 Understand the meaning of measures of central tendency
- 10.1.2 Define and compute the median, and mode
- 10.1.3 Compare the central measures and effect of the shape of distribution on the central measures

10.2 Measures of Central Tendency (Grouped Data)

- 10.2.1 Of frequency distribution: Single value grouping
- 10.2.2 Of a grouped frequency distribution
- 10.2.3 From a histogram

10.3 Measures of Variation: Raw Data

- 10.3.1 Variation, Range, Variance and standard deviation
- 10.3.2 Interpret the values of standard deviation using various rule

10.4 Measures of Variation (Grouped Data)

- 10.4.1 Compute the measures of variation like range and SD of a frequency distribution
- 10.4.2 Compute the measures of variation like range and SD of a grouped frequency distribution
- 10.4.3 Obtain measures of variation from a histogram

10.5 Quartiles and Percentiles (Raw Data)

- 10.5.1 Understand and find quartiles and outliers
- 10.5.2 Find Five-number summary of the data and draw its box-and-whisker plot
- 10.5.3 Understand and compute percentiles

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- 10.6.3 From a histogram

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- 11.1.1 Probability
- 11.1.2 Statistical or Empirical Probability

11.1.3 Mathematical or Classical or a Priory Probability

11.1.4 Subjective Probability

11.1.5 Characteristics of Probability

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11.2.1 Probability of Disjunction of Events

11.2.2 Mutually Exclusive Events

11.3 Conditional Probability

11.3.1 Conditional Events

11.3.2 Multiplication Rule of Probability

11.3.3 Multiplication Rule for Probability of Independent Events

11.4 The Revision of Probabilities and Bayes` Rule

11.4.1 Revision of Probabilities and Bayes` Rule

11.5 Combinatorics

11.5.1 Permutation and Combination

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12.1 Discrete Probability Distributions

12.1.1 Define a random variable and understand the difference between a discrete and a continuous ra

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12.1.3 Make a discrete probability distribution

12.1.4 Differentiate between a relative frequency distribution and probability distribution

12.2 Presentation of a Discrete Probability Distribution

12.2.1 Make graphical representation of a discrete probability distribution

12.2.2 Make its numerical representation

12.2.3 Calculate and interpret the value of mean

12.2.4 Calculate the variance and standard deviation

12.3 Binomial Distribution

12.3.1 Learn about the Binomial experiment

12.3.2 Understand the basic assumptions underlying the binomial probability model

12.3.3 Obtain the probability function of the binomial distribution

12.3.4 Use the binomial probability model in various diverse fields in our day to day life

12.4 Graphical Presentation of The Binomial Distribution

12.4.1 Make graphical presentation of binomial probability distribution and learn its important char

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- 12.5.1 Understand the assumptions of Poisson probability model and state the fo...
- 12.5.2 Use the Poisson probability tables to compute probabilities
- 12.5.3 Approximate the binomial probabilities, using the Poisson distribution
- 12.5.4 Appreciate the importance and applications of Poisson distribution

12.6 Other Discrete Probability Distributions

- 12.6.1 Obtain the probability function of Geometric Distribution and understand its uses
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- 12.7.2 Compute the probabilities (areas) under density curve for simple forms ...

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- 13.1.3 Graphic characteristics of the normal density curve
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- 13.1.6 Empirical rule for the probabilities of normal distribution

13.2 Areas Under The Standard Normal Curve

- 13.2.1 Read Normal Distribution Table for areas under standard normal curve
- 13.2.2 Find areas under standard normal curve
- 13.2.3 Find z for a given area

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- 13.4.1 Applications of The Normal Distribution

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