

Index

A

ANOVA

13.1: One-Way ANOVA

B

bar graph

2.1: Stem-and-Leaf Graphs (Stemplots), Line Graphs, and Bar Graphs

Bernoulli trial

4.3: Binomial Distribution

4.4: Geometric Distribution

binomial probability distribution

4.3: Binomial Distribution

8.3: A Population Proportion

blinding

1.4: Experimental Design and Ethics

box plots

2.4: Box Plots

C

central limit theorem

7.3: Using the Central Limit Theorem

central limit theorem for sums

7.2: The Central Limit Theorem for Sums

cluster sampling

1.2: Data, Sampling, and Variation in Data and Sampling

coefficient of determination

12.3: The Regression Equation

Cohen's Standards

10.1: Two Population Means with Unknown Standard Deviations

Comparing two population means

10.2: Two Population Means with Known Standard Deviations

Comparing Two Population Proportions

10.3: Comparing Two Independent Population Proportions

conditional probability

3.6: Conditional Probability

Conditional Probability Rule

3.6: Conditional Probability

Confidence Interval

9.0: Introduction

contingency table

11.3: Test of Independence

continuous data

1.2: Data, Sampling, and Variation in Data and Sampling

continuous distributions

5.4: Continuous Distribution (Worksheet)

control group

1.4: Experimental Design and Ethics

counting rules

3.7: Counting Rules

cumulative probability distributions

5.0: Introduction

cumulative relative frequency

1.3: Frequency, Frequency Tables, and Levels of Measurement

D

decay parameter

5.3: The Exponential Distribution

Decision

9.4: Rare Events, the Sample, Decision and Conclusion

degrees of freedom

10.1: Two Population Means with Unknown Standard Deviations

direction of a relationship between the variables

12.2: Scatter Plots

discrete data

1.2: Data, Sampling, and Variation in Data and Sampling

Distribution for the differences

10.3: Comparing Two Independent Population Proportions

E

Equal variance

12.4: Testing the Significance of the Correlation Coefficient

ethics

1.4: Experimental Design and Ethics

expected value

4.2: Mean or Expected Value and Standard Deviation

experimental unit

1.4: Experimental Design and Ethics

explanatory variable

1.4: Experimental Design and Ethics

exponential distribution

5.3: The Exponential Distribution

extrapolation

12.5: Prediction

F

F distribution

13.0: Introduction

frequency

1.3: Frequency, Frequency Tables, and Levels of Measurement

Frequency Polygons

2.2: Histograms, Frequency Polygons, and Time Series Graphs

frequency table

1.3: Frequency, Frequency Tables, and Levels of Measurement

G

geometric distribution

4.4: Geometric Distribution

goodness of fit

11.2: Goodness-of-Fit Test

H

Histograms

2.2: Histograms, Frequency Polygons, and Time Series Graphs

homogeneity

11.4: Test for Homogeneity

Hypergeometric Distribution

4.5: Hypergeometric Distribution

hypothesis testing

9.0: Introduction

9.1: Null and Alternative Hypotheses

9.3: Distribution Needed for Hypothesis Testing

9.5: Additional Information and Full Hypothesis Test

Examples

I

independent events

11.3: Test of Independence

inferential statistics

8.0: Introduction

Institutional Review Board

1.4: Experimental Design and Ethics

interpolation

12.5: Prediction

interval of interest

4.6: Poisson Distribution

L

Law of Large Numbers

7.3: Using the Central Limit Theorem

level of measurement

1.3: Frequency, Frequency Tables, and Levels of Measurement

line graph

2.1: Stem-and-Leaf Graphs (Stemplots), Line Graphs, and Bar Graphs

linear correlation coefficient

12.3: The Regression Equation

12.4: Testing the Significance of the Correlation Coefficient

linear equations

12.1: Linear Equations

LINEAR REGRESSION MODEL

12.3: The Regression Equation

lurking variable

1.4: Experimental Design and Ethics

M

margin of error

8.1: A Single Population Mean using the Normal Distribution

matched samples

10.4: Matched or Paired Samples

mean

2.6: Skewness and the Mean, Median, and Mode

4.2: Mean or Expected Value and Standard Deviation

mean for sums

7.2: The Central Limit Theorem for Sums

median

2.3: Measures of the Location of the Data

2.5: Measures of the Center of the Data

2.6: Skewness and the Mean, Median, and Mode

memoryless property

5.3: The Exponential Distribution

mode

2.5: Measures of the Center of the Data

2.6: Skewness and the Mean, Median, and Mode

N

Normal Approximation to the Binomial Distribution

7.3: Using the Central Limit Theorem

normal distribution

6.2: Using the Normal Distribution

6.3: Normal Distribution - Lap Times (Worksheet)

6.4: Normal Distribution - Pinkie Length (Worksheet)

7.1: The Central Limit Theorem for Sample Means (Averages)

O

outliers

2.3: Measures of the Location of the Data

12.6: Outliers

P

Paired Samples

10.4: Matched or Paired Samples

parameter

1.1: Definitions of Statistics, Probability, and Key Terms

Pareto chart

1.2: Data, Sampling, and Variation in Data and Sampling

placebo

1.4: Experimental Design and Ethics

Poisson distribution

4.6: Poisson Distribution

5.3: The Exponential Distribution

Pooled Proportion

10.3: Comparing Two Independent Population Proportions

pooled variance

13.2: The F Distribution and the F-Ratio

population

1.1: Definitions of Statistics, Probability, and Key Terms

population mean

2.5: Measures of the Center of the Data

Population Standard Deviation

2.7: Measures of the Spread of the Data

power of the test

9.2: Outcomes and the Type I and Type II Errors

9.5: Additional Information and Full Hypothesis Test Examples

prediction

12.5: Prediction

probability

1.1: Definitions of Statistics, Probability, and Key Terms

probability distribution function

4.1: Probability Distribution Function (PDF) for a Discrete Random Variable

6.2: Using the Normal Distribution

Q

Qualitative Data

1.2: Data, Sampling, and Variation in Data and Sampling

Quantitative Data

1.2: Data, Sampling, and Variation in Data and Sampling

quartiles

2.3: Measures of the Location of the Data

R

random assignment

1.4: Experimental Design and Ethics

rare events

9.4: Rare Events, the Sample, Decision and Conclusion

reliability

5.3: The Exponential Distribution

response variable

1.4: Experimental Design and Ethics

rounding

1.3: Frequency, Frequency Tables, and Levels of Measurement

S

sample mean

2.5: Measures of the Center of the Data

sample Standard Deviation

2.7: Measures of the Spread of the Data

sampling

1: Sampling and Data

Sampling Bias

1.2: Data, Sampling, and Variation in Data and Sampling

sampling distribution of the mean

7.1: The Central Limit Theorem for Sample Means (Averages)

Sampling Error

1.2: Data, Sampling, and Variation in Data and Sampling

sampling with replacement

1.2: Data, Sampling, and Variation in Data and Sampling

sampling without replacement

1.2: Data, Sampling, and Variation in Data and Sampling

scatter plot

12.2: Scatter Plots

significance level

9.4: Rare Events, the Sample, Decision and Conclusion

Skewed

2.4: Box Plots

2.6: Skewness and the Mean, Median, and Mode

slope

12.1: Linear Equations

standard deviation

2.7: Measures of the Spread of the Data

4.2: Mean or Expected Value and Standard Deviation

Standard deviation for Sums

7.2: The Central Limit Theorem for Sums

standard error

10.1: Two Population Means with Unknown Standard Deviations

Standard Error of the Mean

7.1: The Central Limit Theorem for Sample Means (Averages)

standard normal distribution

6.0: Introduction

6.1: The Standard Normal Distribution

statistic

1.1: Definitions of Statistics, Probability, and Key Terms

stemplot

2.1: Stem-and-Leaf Graphs (Stemplots), Line Graphs, and Bar Graphs

strength of a relationship between the variables

12.2: Scatter Plots

T

test for homogeneity

11.4: Test for Homogeneity

test statistic

10.4: Matched or Paired Samples

The alternative hypothesis

9.1: Null and Alternative Hypotheses

the central limit theorem

7: The Central Limit Theorem

The null hypothesis

9.1: Null and Alternative Hypotheses

Time Series Graphs

2.2: Histograms, Frequency Polygons, and Time Series Graphs

treatments

1.4: Experimental Design and Ethics

type I error

9.2: Outcomes and the Type I and Type II Errors

type II error

9.2: Outcomes and the Type I and Type II Errors

U

uniform distribution

5.2: The Uniform Distribution

V

variable

1.1: Definitions of Statistics, Probability, and Key Terms

variation due to error or unexplained variation

13.2: The F Distribution and the F-Ratio

variation due to treatment or explained variation

13.2: The F Distribution and the F-Ratio