

Textbook Sections by Competency

Wednesday, August 13, 2025 9:21 AM

Note: Sections are from OpenStax *Introductory Statistics* by Barbara Illowsky and Susan Blount.

1. Solve problems including discrete and continuous probability distributions using statistical methods.
 - a. All sections covered below
2. Identify examples of the different levels of data measurement and recognize several different types of sampling.
 - a. 1.1, 1.2, 1.3, 1.4, 1.5, 1.6
3. Construct various types of graphical displays of data.
 - a. 2.1, 2.2, 2.4
4. Calculate and apply measures of central tendency, measures of dispersion, and measures of position, including the five-number summary.
 - a. 2.3, 2.5, 2.6, 2.7, 2.8
5. Apply the basic principles of probability.
 - a. 3.1, 3.2, 3.3, 3.4, 3.5, 3.6
6. Identify discrete probability distributions (including the binomial distribution) and calculate means, variances, and standard deviations for them.
 - a. 4.1, 4.2, 4.3, 5.1
7. Calculate z-scores for values in normal distribution, and find critical values for given probabilities.
 - a. 6.1, 6.2, 6.3, 6.4
8. Calculate normal approximations to binomial distributions.
 - a. 7.3
9. Apply the Central Limit Theorem when appropriate.
 - a. 7.1, 7.2, 7.3, 7.4, 7.5
10. Calculate point and interval estimates for large- and small-sample population means, proportions, and variances (standard deviations).
 - a. 8.1, 8.2, 8.3, 8.4, 8.5, 8.6
11. Determine adequate sample size needed to accurately estimate population means, proportions, and variances (standard deviations).
 - a. 6.2, 7.3
12. Test hypotheses about means, proportions, and variances (standard deviations) for large and small samples.
 - a. 9.1, 9.2, 9.3, 9.4, 9.5, 9.6
13. Test the significance of the relationship between two variables.
 - a. 12.4
14. Determine a linear regression equation.
 - a. 12.3, 12.5
15. Differentiate between correlation and causation
 - a. 12.3