

AP[®] Statistics

Exam starts at

12:00

FRI

15

May 2020

EXAM TOPICS

Unit 1: Exploring One-Variable Data

Unit 2: Exploring Two-Variable Data

Unit 3: Collecting Data

Unit 4: Probability, Random Variables, and Probability Distributions

Unit 5: Sampling Distributions

Unit 6: Inference for Categorical Data: Proportions

Unit 7: Inference for Quantitative Data: Means

Unit 8: Inference for Categorical Data: Chi-Square

Unit 9: Inference for Quantitative Data: Slopes

SECTION 1

50% OF SCORE

1 HR
30 min

40 Multiple-Choice Questions

SECTION 2

50% OF SCORE

1 HR
30 min

6 Free-Response Questions

Part A | 5 problems:

- 1 multipart question with a primary focus on collecting data
- 1 multipart question with a primary focus on exploring data
- 1 multipart question with a primary focus on probability and sampling distributions
- 1 question with a primary focus on inference
- 1 question that combines 2 or more skill categories

Part B | 1 problem:

- 1 investigative task that assesses multiple skill categories and content areas, focusing on the application of skills and content in new contexts or in non-routine ways

Statistics Notation

a b n p q r s t x y z α β χ μ σ E F H P

Notation is an important part of communication in mathematics. Using the correct notation for statistical concepts is essential. BE CAREFUL! In statistics, unlike algebra, you are NOT free to substitute another letter in place of standard notation. Each of the above letters has a specific meaning in statistics. Also remember that “hats” and “bars” change those meanings. For example, y , \hat{y} , and \bar{y} each have a very different meaning. Also, capitalizing a letter can change its meaning.

First Semester Concepts:

1. Identify the letter used for the mean of a population.
2. Identify the letter used for the mean of a sample.
3. Identify the letter used for the standard deviation of a population.
4. Identify the letter used for the standard deviation of a sample.
5. Explain the difference between x_2 and x_i .

6. Identify the letter that represents the standard normal variable.
7. Which letter represents the slope of the least-squares regression line?
8. Which letter represents the y-intercept of the least-squares regression line?
9. Explain the difference between y , \hat{y} , and \bar{y} .

10. Explain the difference between y_2 and \hat{y}_2 .

11. Identify the letter used for correlation.
12. Which letters are most commonly used for random variables?
13. Explain the difference between the variables x and X .

14. Identify the letter that represents the number of observations in a sample.
15. Identify the letter used for the probability of an event.