Elementary Statistics: Exam 5: Lesson 11*

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Abstract

Practice final exam for use with Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean.

Exercise 1 ***(Solution on p. 3.)***

Suppose the random variable X follows a chi-square distribution with degrees of freedom equal to 35. Fill in the blanks.

A. $m =$
B. $s =$

Exercise 2 ***(Solution on p. 3.)***

Check all that apply.

A. The chi-square graph always has the same shape.
B. If X follows a chi-square distribution with df = 200, then X approximately follows a normal distribution.
C. The chi-square distribution is skewed to the right if the degrees of freedom are less than 90.
D. The test statistic for the chi-square distribution may be zero.
E. A goodness-of-fit hypothesis test is always right-tailed.
F. A test of independence tests whether two factors are independent or not.

Exercise 3 ***(Solution on p. 3.)***

Write the null and alternate hypotheses for the following:

It is believed that public high school students attend school in equal numbers for each day of the school week. Suppose a sample of the days students were present at school was taken for one particular high school:

- 1750 students were present on Monday
- 1800 students were present on Tuesday

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- 1840 students were present on Wednesday
- 1810 students were present on Thursday
- 1800 students were present on Friday

Ho:

Ha:

Solutions to Exercises in this Module

Solution to Exercise (p. 1)

A. 35

B. 8.3666

Solution to Exercise (p. 1)

B, C, D, and F

Solution to Exercise (p. 1)

Ho: Public high school students attend school in equal numbers for each day of the school week

Ha: Public high school students DO NOT attend school in equal numbers for each day of the school week