

MITx: 14.310x Data Analysis for Social Scientists

Heli



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Useful Facts about Unbiased Estimators - Quiz

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Question 1

1.0/1.0 point (graded)

Which of the following estimators for the population mean and population variance are unbiased for an i.i.d. sample? (Select all that apply.)

- lacksquare a. Population mean: $rac{n}{2}\sum_{i=1}^n X_i$
- lacksquare b. Population mean: $rac{1}{2} \max\{X_1, X_2, \dots X_n\}$
- igspace c. Population variance: $rac{1}{n}\sum (X_i-ar{X_n})^2$
- ullet d. Population variance: $rac{1}{n-1}\sum (X_i-ar{X_n})^2$



Explanation

In this lecture segment, we learnt that the sample mean and sample variance are unbiased estimators of the population mean and population variance, respectively, for an i.i.d. sample. Neither (a) nor (b) are the correct formulas for sample mean. Out of (c) and (d), (d) is the correct formula for the unbiased

- Module 5: Moments of a Random Variable,
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- ▼ Module 7: Assessing and Deriving Estimators - Confidence Intervals, and Hypothesis Testing

<u>Assessing and Deriving</u> Estimators

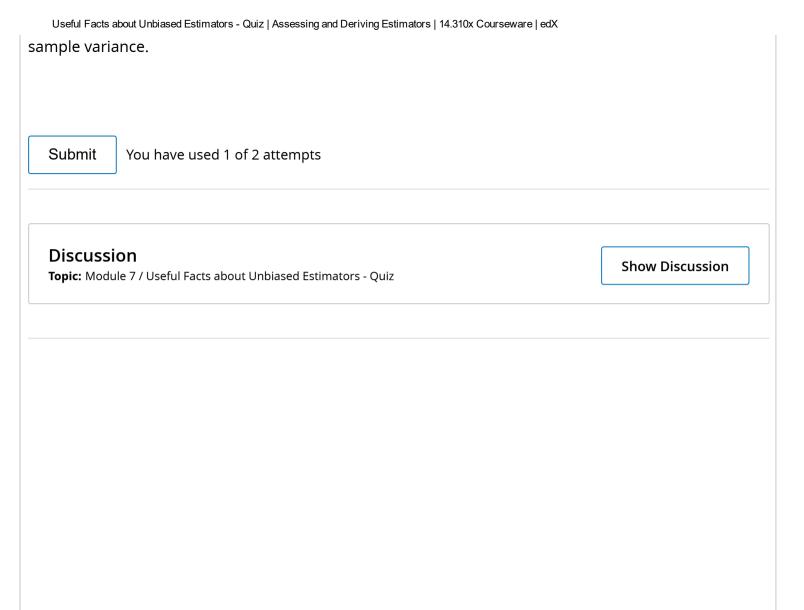
Finger Exercises due Nov 14, 2016 at 05:00 IST

Confidence Intervals and Hypothesis Testing

Finger Exercises due Nov 14, 2016 at 05:00 IST

Module 7: Homework

<u>Homework due Nov 07, 2016 at 05:00 IST</u>



Exit Survey

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