

MITx: 14.310x Data Analysis for Social Scientists

Helj



- Module 1: The Basics of R and Introduction to the Course
- Entrance Survey
- Module 2:

 Fundamentals of
 Probability, Random

 Variables, Distributions,
 and Joint Distributions
- Module 3: Gathering and Collecting Data, Ethics, and Kernel Density Estimates
- Module 4: Joint,
 Marginal, and
 Conditional
 Distributions &
 Functions of Random
 Variable

Module 6: Special Distributions, the Sample Mean, the Central Limit Theorem, and Estimation > Human Subjects and Special Distributions > The Normal Distribution - Quiz

The Normal Distribution - Quiz

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Question 1

1 point possible (graded)

True or False: If you have a set of i.i.d normal random variables, then any linear combination of these variables will follow a uniform distribution.



Explanation

False. As discussed in class, any linear combination of normally distributed random variables, will also follow a normal distribution. . We will see that this is a very useful property.

Submit You have used 1 of 1 attempts

- Module 5: Moments of a Random Variable,
 Applications to Auctions,
 Intro to Regression
- Module 6: Special
 Distributions, the
 Sample Mean, the
 Central Limit Theorem,
 and Estimation

Human Subjects and Special Distributions

Finger Exercises due Nov 07, 2016 at 05:00 IST

The Sample Mean, Central Limit Theorem, and Estimation

Finger Exercises due Nov 07, 2016 at 05:00 IST

Module 6: Homework

Homework due Oct 31, 2016 at 05:00 IST

▶ Exit Survey

★ Incorrect (0/1 point)

Question 2

1/1 point (graded)

True or False: Taking a linear transformation of a normally-distributed random variable generates a normally-distributed random variable. In other words, if X_1 is normally-distributed and $X_2 = a + b * X_1$, then X_2 is also normally-distributed.

- a. True
- b. False

Explanation

This is true. We will also see that this is another useful property of the normal distribution.

Submit

(A)

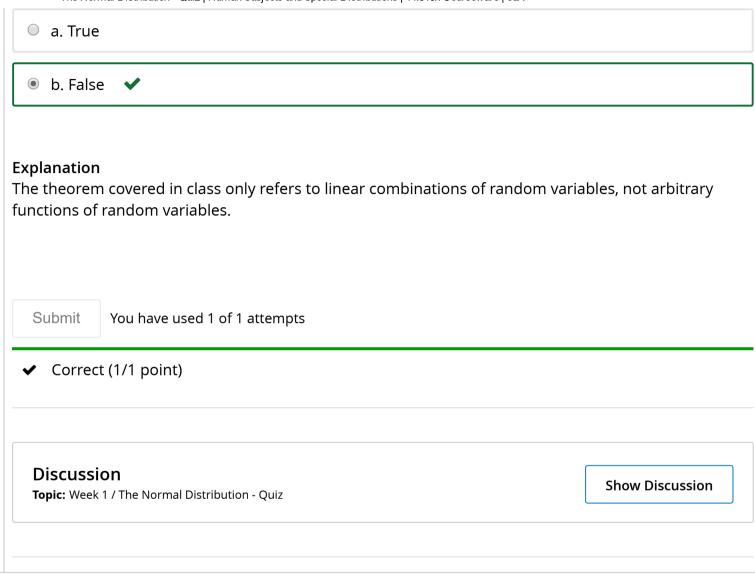
You have used 1 of 1 attempts

✓ Correct (1/1 point)

Question 3

1/1 point (graded)

True or False: If X_1,\dots,X_n are i.i.d. and $X_i\sim N(\mu_i\sigma_i^2)$ $ext{then }Y=\sum_i X_i^2\sim N(\sum_i\mu_i^2,\sum_i\sigma_i^2)$



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