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Convolution in the Context of Probability - Quiz

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Question 1

0 points possible (ungraded)


What do we mean by convolution in the context of probability? (Select all that apply)

- ☐ a. a coil or twist, especially one of many.
- ☒ b. the sum of independent random variables ✓
- ☐ c. any function of random variables
- ☐ d. all combinations and permutations of random variables
- ☐ e. the product of marginal PDFs
- ☒ f. linear combinations of independent random variables ✓




Explanation

Joint, Marginal, and Conditional Distributions

Finger Exercises due Oct 24, 2016
at 05:00 IST 

Functions of Random Variables

Finger Exercises due Oct 24, 2016
at 05:00 IST 

Module 4: Homework

Homework due Oct 17, 2016 at
05:00 IST 

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As Professor Ellison explained in class, a convolution in the context of probability refers to linear functions of random variables, for example, the sum of independent random variables.

Submit

You have used 2 of 2 attempts

✓ Correct

Question 2

1 point possible (graded)

True or False: In order to find the distribution of the sum of random variables, the random variables need to be independent.

☒ True ✗

☐ False ✓

Explanation

Independence is *not* a requirement for you to be able to find the PDF of the sum of random variables. However, independence does make it very easy to find the joint PDF of random variables, because if you know they are independent, then the joint density is just given by the product of their marginal densities.

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You have used 1 of 1 attempts

✖ Incorrect (0/1 point)

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