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## Conditional Distributions - Quiz

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### Question 1

1/1 point (graded)


Suppose that you have two random variables A and B, and you know that A takes on a specific value a. The conditional PDF of B is given by which of the following?

- ☐ a. The joint PDF divided by the product of the two marginal PDFs
- ☐ b. The joint PDF divided by the sum of the two marginal PDFs
- ☐ c. The joint PDF divided by the marginal PDF of B
- ☒ d. The joint PDF divided by the marginal PDF of A ✓


### Explanation

The conditional PDF of B given what you know about A would be calculated as the joint PDF divided by the marginal PDF of A, to “condition” the representation of the distribution of B based on what you know about A. In mathematical terms:


**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  
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**Module 4: Homework**

Homework due Oct 17, 2016 at  
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$$f_{B|A} = \frac{f_{AB}(a,b)}{f_A(a)}$$

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You have used 1 of 2 attempts

✓ Correct (1/1 point)

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