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- **Module 4: Joint, Marginal, and Conditional Distributions & Functions of Random Variable**

Functions of Random Variables, Part II - Quiz

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Question 1

1 point possible (graded)

Suppose you have the CDF for some random variable, X that follows a binomial distribution with $p = 0.2$. Suppose further that you want to find the density of $Y = X^2$, and that the CDF of Y, $F_Y(y)$ is known.

True or False: The density of Y can be found by differentiating the CDF.

- (•) True ✖
- ( ) False ✔

Explanation

Since X follows a binomial distribution, it is a discrete random variable, so standard functions of it will also be discrete. Therefore, even if we know that CDF of Y, we can not differentiate to obtain its distribution, or PF. The method Professor Ellison outlined in class only applies to continuous random variables.

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

- Module 5: Moments of a Random Variable, Applications to Auctions, & Intro to Regression
- Exit Survey

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