edX **MITx: 14.310x Data Analysis for Social Scientists**

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▶ Module 1: The Basics of R and Introduction to the Course

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▼ **Module 2: Fundamentals of Probability, Random Variables, Distributions, and Joint Distributions**

Fundamentals of Probability
Finger Exercises due Oct 10, 2016 at 05:00 IST 🖉

Random Variables, Distributions, and Joint Distributions
Finger Exercises due Oct 10, 2016 at 05:00 IST 🖉

Module 2: Homework
Homework due Oct 03, 2016 at 05:00 IST 🖉

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Question 1

 (1/1 point)
Based on the properties described in class, which of the following could represent a CDF for a discrete or continuous random variable? (Check all that apply.)
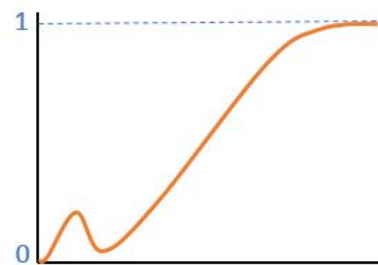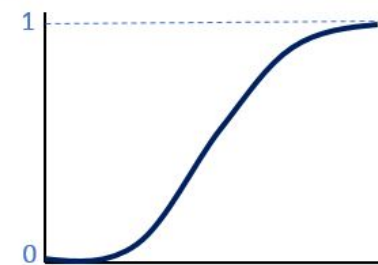
▸ Exit Survey

A

B

C

D

☑ A ✔

☐ B

☐ C

☑ D ✔

✔

EXPLANATION

A and D are valid CDFs. Both are non-decreasing functions, originating at zero and asymptote at 1. B is not a valid CDF since it does not start at zero (implying a positive probability for impossible values of the variable). C is not a valid CDF since there is a non-decreasing portion towards the origin.

You have used 2 of 2 submissions

Question 2

(1/1 point)

Given the below CDF for a continuous random variable X, what of the following is an accurate statement?
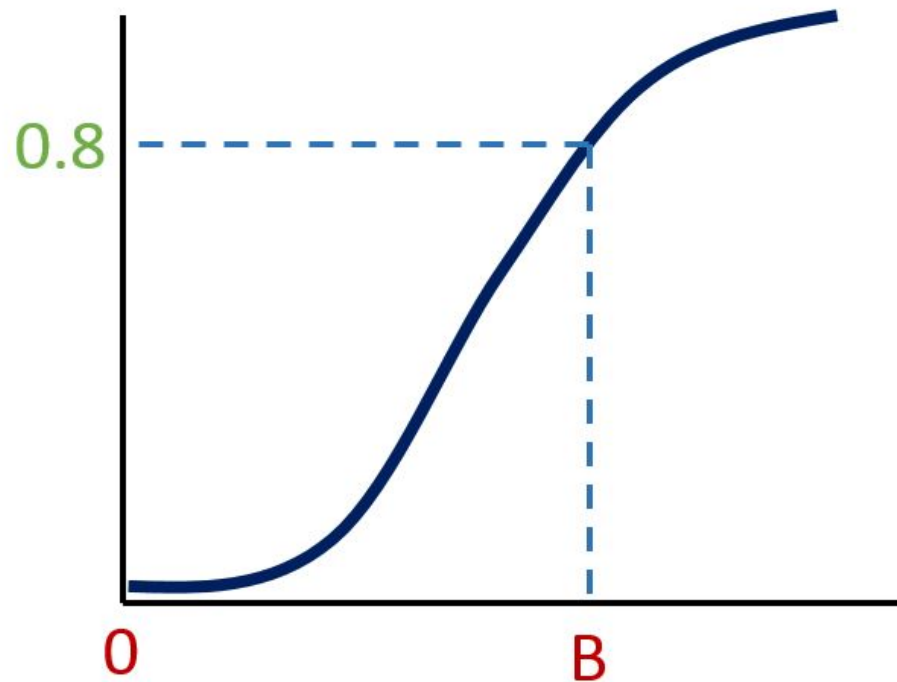
○ a. The probability that x takes on the value B is 0.8

◉ b. The probability that x takes on a value between 0 and B is 0.8 ✔

○ c. B is equal to 0.8 with some positive probability

○ d. We cannot say anything about the variable based on this information alone

You have used 1 of 2 submissions