



Bookmarks

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

Welcome to the Course**Introduction to R****Introductory Lecture**

Finger Exercises due Oct 03, 2016 at 05:00 IST

Module 1: Homework

Homework due Sep 26, 2016 at 05:00 IST

- ▶ Entrance Survey
- ▶ **Module 2:
Fundamentals of
Probability, Random
Variables, Distributions,
and Joint Distributions**
- ▶ Exit Survey

Module 2: Fundamentals of Probability, Random Variables, Distributions, and Joint Distributions > Fundamentals of Probability > Set Theory and Probability - Quiz

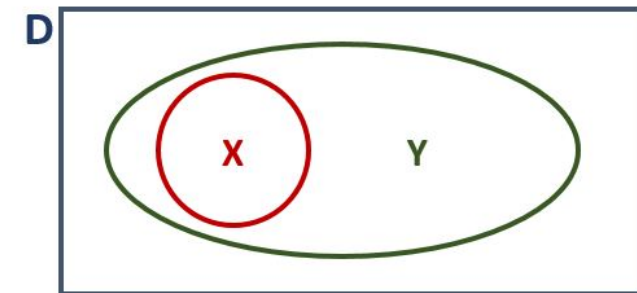
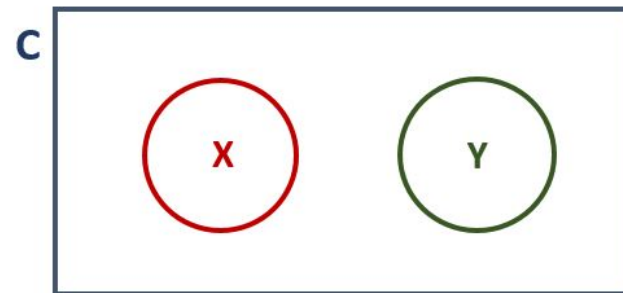
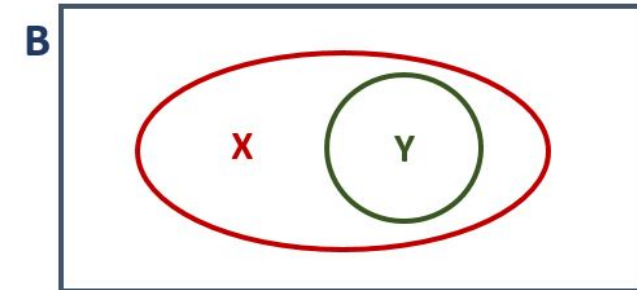
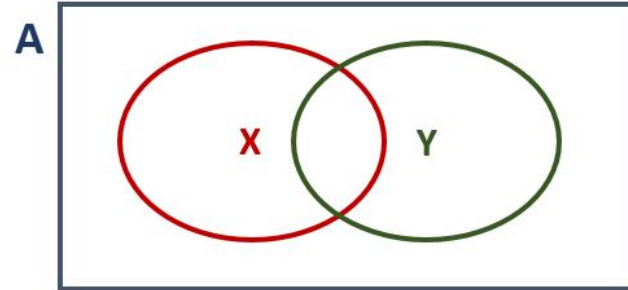


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Question 1

(1/1 point)

Suppose that X is contained in Y . Which of the following diagrams represents the sample space where X is contained in Y ?



☐ A

☐ B

☐ C

☒ D ✓

EXPLANATION

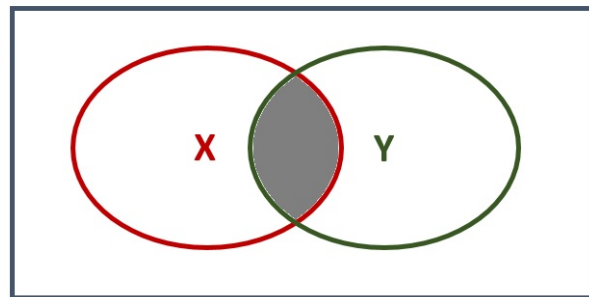
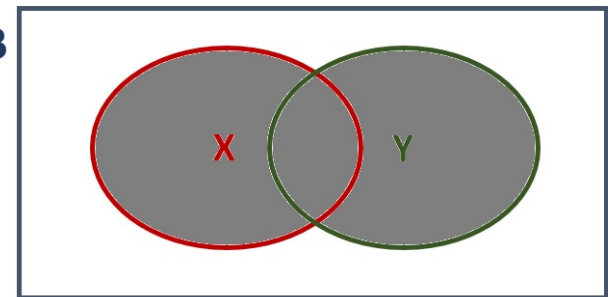
Diagram D represents the case where X is contained in Y . If X is contained in Y , then that means that all possible outcomes of X also belong within the set of possible outcomes of Y .

You have used 1 of 2 submissions

Question 2

(1/1 point)

In the diagrams below, which of the following shaded areas shows the union of X and Y ?

A**B**

☐ A

☒ B ✓

EXPLANATION

Diagram B shows the union of X and Y. In contrast, diagram A shows the intersection of A and B.

You have used 1 of 1 submissions

Question 3

(1/1 point)

True or false: In set theory, what is noted as $A \cap B$ (the intersection of A and B) is equivalent to what in probability is denoted AB.

☒ a. True ✓

☐ b. False

EXPLANATION

This is true. As Professor Ellison explains in lecture, in set theory, the notation for the intersection of A and B, $A \cap B$, is equivalently denoted AB in probability theory.

You have used 1 of 1 submissions

Question 4

(1/1 point)

Which of the following provides the best definition of two events that are mutually exclusive?

- ☐ a. Two events that **may or may not** both occur or be true at the same time
- ☐ b. Two events that **always** both occur or be true at the same time
- ☒ c. Two events that can **never both** occur or be true at the same time ✓
- ☐ d. It depends on the two events in question

EXPLANATION

Mutually exclusive refers to two events that cannot both occur or be true at the same time. for example, the two events "It is Tuesday" or "It is Sunday" are mutually exclusive events.

You have used 1 of 2 submissions



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