



MITx: 6.041x Introduction to Probability - The Science of Uncertainty



Bookmarks

► Unit 0:
Overview

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▼ Unit 1:
Probability
models and
axioms

Lec. 1: Probability
models and
axioms

Exercises 1 due Feb
10, 2016 at 23:59 UTC

Mathematical
background: Sets;
sequences, limits,
and series;
(un)countable sets.

Solved problems

Problem Set 1

Problem Set 1 due Feb
10, 2016 at 23:59 UTC

Unit 1: Probability models and axioms > Problem Set 1 > Problem 2 Vertical: Set operations and probabilities



Bookmark

PROBLEM 2: SET OPERATIONS AND PROBABILITIES

(3/3 points)

Find the value of $\mathbf{P}(A \cup (B^c \cup C^c)^c)$ for each of the following cases:

1. The events A, B, C are disjoint events and $\mathbf{P}(A) = 2/5$.

$$\mathbf{P}(A \cup (B^c \cup C^c)^c) = \boxed{0.4} \quad \checkmark$$

2. The events A and C are disjoint, and $\mathbf{P}(A) = 1/2$ and $\mathbf{P}(B \cap C) = 1/4$.

$$\mathbf{P}(A \cup (B^c \cup C^c)^c) = \boxed{0.75} \quad \checkmark$$

3. $\mathbf{P}(A^c \cap (B^c \cup C^c)) = 0.7$.

$$\mathbf{P}(A \cup (B^c \cup C^c)^c) = \boxed{0.3} \quad \checkmark$$

You have used 1 of 2 submissions

DISCUSSION

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