



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



Bookmarks

- ▶ Unit 0:
Overview
- ▶ Entrance
Survey
- ▶ Unit 1:
Probability
models and
axioms
- ▼ Unit 2:
Conditioning
and
independence

Unit overview

Lec. 2:
 Conditioning and
 Bayes' rule

 Exercises 2 due Feb
 17, 2016 at 23:59 UT

Lec. 3:
 Independence

 Exercises 3 due Feb
 17, 2016 at 23:59 UT

Solved problems

Problem Set 2

 Problem Set 2 due Feb
 17, 2016 at 23:59 UT

Unit 2: Conditioning and independence > Lec. 3: Independence > Lec 3 Independence vertical1



Bookmark

Exercise: Independence of two events - II

(1/1 point)

Let A be an event, a subset of the sample space Ω . Are A and Ω independent?



Answer: Yes, they are independent

Answer:

Yes, because $\mathbf{P}(A \cap \Omega) = \mathbf{P}(A) = \mathbf{P}(A) \cdot 1 = \mathbf{P}(A) \cdot \mathbf{P}(\Omega)$

Intuitively, $\mathbf{P}(A)$ represents our beliefs about the likelihood that A will occur. If we are told that Ω occurred, this does not give us any new information; we already knew that Ω is certain to occur. For this reason, $\mathbf{P}(A \mid \Omega) = \mathbf{P}(A)$.

You have used 1 of 1 submissions

© All Rights Reserved



© edX Inc. All rights reserved except where noted. EdX, Open edX and the edX and Open EdX logos are registered trademarks or trademarks of edX Inc.

