3. Exercise: Conditional probabilities

Exercises due Feb 12, 2020 05:29 IST *Completed*

Exercise: Conditional probabilities

2/2 points (graded)

Are the following statements true of false?

1. If Ω is finite and we have a discrete uniform probability law, and if $B \neq \emptyset$, then the conditional probability law on B, given that B occurred, is also discrete uniform.

   True ✔ **Answer:** True

2. If Ω is finite and we have a discrete uniform probability law, and if $B \neq \emptyset$, then the conditional probability law on Ω, given that B occurred, is also discrete uniform.

   False ✔ **Answer:** False

Solution:

1. True, because the outcomes inside B maintain the same relative proportions as in the original probability law.

2. False. Outcomes in Ω that are outside B have zero conditional probability, so it cannot be the case that all outcomes in Ω have the same conditional probability.

Submit You have used 1 of 1 attempt

Answers are displayed within the problem

Discussion

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Topic: Unit 2: Conditioning and independence:Lec. 2: Conditioning and Bayes' rule / 3. Exercise: Conditional probabilities

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Positioning the Tenet that P(B) = 1 [Tone: with all deference and respect, but tersely. (Otherwise, it would be twice as long.)] The whole t...	1
Question 2 is not logic or need more explanation when I solve any question I back to the lecture and try to understand it completely, I solved q1 which i...	7
Confused on Question 1 The conditional probability of B , given that B occurred, should be [edited to remove answer]? What's ...	21
Explanation for Q2. The explanation that I gave is that [edited to remove answer]. Is this reasoning correct?	3
If probability is equal to 1... Does it tell anything if that the subset (subevent) has discrete uniform or not. I don't get it. Or does it ...	1
Visually Impired by single letter Ω I replied the second question assuming both questions are the same, but different is only one letter ...	1
[Staff] The 2d question requres an additional assumption on B, without it the given answer is incorrect	4
Explaining Question 2 [edited by staff to remove lot of detail related to the answer]	2
panos 2. P(Ω|B)=(P(Ω∩B))/(P(B))=(P(B))/(P(B))=1 so it is false.	10
The Science of Uncertainty. Yes Qn. 2 was confusing but after failing it, i have digested it after finding the answer. Thank you.	2
Technical Issues Hi, I had a strange issue with my submission where I selected the correct answers for the two questio...	2
Confusing wording The wording of this exercise is confusing.. Especially in 2 - by default we'd assume that B belongs to O...	9
It's not at all clear what this question was asking. What does it mean for there to be a "conditional probability law on" something? Or, for that matter, f...	5