Exercise: Conditional probabilities

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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

Answer:

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.

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