EXERCISE: SAMPLE SPACE (2/2 points)

For the experiment of flipping a coin, and for each one of the following choices, determine whether we have a legitimate sample space:

$\Omega = \{\text{Heads and it is raining, Heads and it is not raining, Tails}\}$

Yes ✔ **Answer:** Yes

$\Omega = \{\text{Heads and it is raining, Tails and it is not raining, Tails}\}$

No ✔ **Answer:** No

Answer:
In the first case, the elements of Ω are mutually exclusive and collectively exhaustive, and therefore Ω is a legitimate sample space.

For the second case, if the outcome is “Tails and it is not raining," then the outcome “Tails" will have also occurred. Therefore the elements of Ω are not mutually exclusive, and Ω is not a legitimate sample space.

You have used 1 of 1 submissions


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