Q1. [10] *Sleeping Beauty* (aka Ms. SB) has agreed to an experiment as follows: On Sunday she will be put to sleep. Once or twice, during the experiment, SB will be wakened, interviewed, and put back to sleep with an amnesia-inducing drug that makes her forget that awakening. A fair coin will be tossed to determine which experimental procedure to undertake: if the coin comes up heads, Beauty will be wakened and interviewed on Monday only. If the coin comes up tails, she will be wakened and interviewed on Monday and Tuesday. In either case, she will be wakened on Wednesday without interview and the experiment ends.

When SB is wakened and interviewed, she is asked, “What is your belief now for the proposition that the coin landed heads?” What do you think her answer is?

SOLN.1 SB receives no new (e.g. non-self-locating) information throughout the experiment because she is told the details of the experiment. Since her belief before the experiment is \( P(\text{Heads}) = 1/2 \), she ought to continue to have the same belief of \( P(\text{Heads}) = 1/2 \) since she gains no new relevant evidence when she wakes up during the experiment.

Note: The answer above is usually called a “halfer” solution; there is a “thirder” solution: The philosophers continue to argue over these!