Beth Will Lewis Carroll test

Judge View Tree View List of Debates Hide notes Side: None Phase: **Make Argument** Remaining: **10:00**

At root

0 Q (H): A bag contains one counter, known to be either white or black with probability 1/2. A white counter is put in, the bag shaken, and a counter drawn out, which proves to be white. What is now the chance of drawing a white counter?

H: 2/3 D: 1/2

Notes:

Q: If I update using bayes rule based on observing that a white counter was drawn the first time, what is the chance of drawing a white counter the second time?

H: 2/3 D: Probably 2/3

1 Payment: H D None Recurse

Notes:

Q: If I break down the probabilities into scenarios, and then discard scenarios where a white counter is not drawn the first time, what is the probability of drawing a white counter the second time?

H: 2/3 D: Probably 2/3

2 Payment: H D None Recurse

Notes:

Q: Meta-debate: Given the questions and answers in this round, which is the better answer to the question?

H: 2/3 D: Draw

5 Payment: H D None Recurse

Notes:

Q: What is the probability of drawing a white counter at the start (before the white counter is put in)?

H: D: 1/2

3 Payment: H D None Recurse

Notes:

Q: Does putting in a white counter then removing a white counter change anything about the number of white and black counters in the bag?

H: D: No

4 Payment: H D None Recurse

Notes: Beth means - if there are a certain number of black and white counters, and you put in one white counter and remove one white counter, there are the same number of black and white counters

Q: Therefore, is the probability of drawing a white counter still 1/2?

H: No, you have different information about what counter is in the bag, the probability is 2/3.

D: Yes

6 Payment: H D None Recurse

Notes: Beth means: if you have two bags with the same number of black and white counters, you have the same probability of drawing a white counter from either