

0 Question: A prize is behind 1 of 3 doors. You choose a door at random. The host opens one of the other doors to reveal it doesn't contain the prize. Should you switch to the unopened door? The host's policy is to always open a door, and to randomly choose one door to open that (a) you didn't choose and that (b) doesn't contain the prize.

A1: Yes

A2: It probably doesn't make any difference if you switch

#### Arguments for A1

2 Question: Is there a  $1/3$  probability of the prize being behind the door you chose if you don't switch?

A1: Yes

A2: It's unclear

3 Question: Is there a  $2/3$  probability of the prize being behind the door if you switch?

A1: Yes

A2: Probably not

4 Question: In this question, you should switch since there is a greater probability of the prize being behind the door you switch to?

A1: Yes

A2: If this was true, then yes you should switch

#### Arguments for A2

1 Question: At the start of the game, is there an equal chance that the prize is behind the door you chose or that it's behind the unopened door?

A1: Yes, however you are given further information once the door is opened.

A2: Yes

5 Question: Does the host opening the other door change anything about which door the prize is behind?

A1: No

A2: Probably not

6 Question: If the two doors had the same probability of having the prize initially, and nothing changed where the prize is, do they still have the same probability of having the prize?

A1: No

A2: Yes

7 Question: If the door you chose and the unopened door have the same probability of having the prize, should you switch?

A1: No, but this definition of probability does not take into account given information and is not correct to use.

A2: It doesn't make any difference if you switch