

# Game theory essay examples

[Psychology](#), [Success](#)



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## Question 1

In the movie, there are 3 doors, one door with a car and the other two doors with a goat on each. An individual wins the car when he selects the door behind the car. The host of the theory will never open the door with the car since he knows what is behind each door. The host Monty presents the choice for an individual to stick with door 1 or else select the other doors. In Professor Rosa classroom, Ben finds himself in a fix to answer whether he could stick with door 1 or opt to chose from the other two doors.

I agree that the understanding of the game theory and probability is advantageous to a player when choosing the doors. This is because one compares the probability of winning the car when sticking to the original option rather than taking sides before Monty reveals the answers. An individual with the knowledge of probability knows that he has a chance of  $\frac{1}{3}$  in any door chosen. Either sticking with door 1 or opting for door 2 and 3 do not interfere with your chances to win the car as the probability remains

1/3. This gives confidence to the player and increases his chances of emerging the winner.

## Question 2

When leaving the team, Ben approaches Rosa with a deal to win more cash. They had to go back in Vegas to apply game theory in the card counting before the casinos were installed with the biometric software. This software could limit their probability of winning since it could rapidly identify card counter. However, the offer was valid if Rosa could also agree to play as a successful “big player”. At the end of movie, Ben also applied the theory when making his decision. He knew that Rosa would steal the bag that was full of their winnings. Thus, Ben fill the bag with chocolate coins and put him in the cab driven by the casino manager.

## Question 3

Game theory is tied to probability in the following way; the participant must know that there is a probability of 1/3 in indicating that the car is behind each door. The best strategy in winning the game is to switch the doors as this increases the chances of winning the game by 2/3. A player with the knowledge of probability makes sure that he goes with the choice that puts his probability of winning at maximum.

### **Look at these three instances of probability:**

1. When the car is at door 1, the host opens door 2 or 3 where the goat is. A person is needed to switch to 2 or 3 remembering the car it at door 1
2. If door has the car, Monty automatically opens door 3. He does not have an option of choosing door 1 as it is the original choice. Therefore, one

switches to door 2 and becomes the winner.

3. In case the car is at door 3, the host will unlock door 2 since he prefers not to open the door with the car. The player therefore goes straight to switch to door 3 and he will win the game. Everything here is a game of probability.

The MIT teams are in a position to determine the loser and the winner in the game by basing their decisions on statistical analysis. There applies the use of mathematical methods where they count cards in blackjack.

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