



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai

Accredited by NAAC-UGC with 'A++' Grade (Cycle III) &

Accredited by NBA (B.E - CSE, EEE, ECE, Mech & B.Tech.IT)

COIMBATORE-641 035, TAMIL NADU

DEPARTMENT OF MATHEMATICS

PUZZLE

The President decides to give a prisoner, who is about to be sentenced to death, one last chance to live. There are 2 doors, one - the life door and the other - the death door. There is one security person standing by each door, who knows about the doors. However, one of them always tells the truth and the other always tells a lie. There is no way to identify which door is the life door and which is the death door. There is no way to distinguish which security person is telling the truth. The prisoner can only ask only one question from any of the security person. After this he needs to choose a door. If he walks in the death door, then he will be executed. If he walks in the life door, he will get a life. He did choose the life door and lived. What was the question he asked? How did he choose the door after he got the answer from one of the security person?

Solution & Explanation

Assume the security person X is by door X and the other person is by door Y. Let the prisoner go to person X and asks this question "If I ask person Y what door is door Y, then what will be answer given by him: life door or death door?"

If the answer is life door (door X), he can walk in the door Y. If the answer is death door (door Y), he can choose the door Y and walk in. This is because the question goes through 2 levels of questions from 2 people. The overall answer will be always a lie because there is always one person lying and the other telling the truth.