

The Dice Game

A rich friend challenges you to a special game of dice, with a very special set of 3 dice. Each die has six faces but only two values:

Red: 3 3 3 3 3 6

Blue: 2 2 2 5 5 5 Olive: 1 4 4 4 4 4

Each of you must pick one die and roll it. Whoever rolls the highest number wins the round. Whoever wins the most rounds (out of 15 rounds) wins the game!

Which die should you pick in order to have the best chance of winning the game?

The Game Show

You are a contestant on the classic game show, “Let’s Make a Deal”.

You are presented with 3 closed doors. Behind one of these doors is a brand-new car, and behind the other two doors are goats. You are asked to pick one of the doors and win whichever is behind that door!

a. What are your chances of winning the car?

You pick one, but before they open your chosen door, the host (who privately knows which door is the winning door) first opens another door you didn’t choose, showing you a goat. He then offers you a choice:

“Would you like to change your mind and pick the other (unopened) door, or would you like to stay with your original door?”

b. What are your chances of winning the car now? Would changing your mind make a difference in your chances of winning?