Project Description

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Playing Dice Game

You are given a set of dices and you are going to play a dice game with this set. You have to decide who chooses the dice first, you or your opponent. Then you play against the opponent provided by us. Both of you pick your dices. The throws of the chosen dices are simulated many times. Your goal is to win as many games as possible

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- So, how should one do that?

Determining a Winning Player

The following criteria holds

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We actually have to show two statements here:

- If there is a dice that is better than all others, then the first player wins

- If there is no dice that is better than all others, then the first player does not win

Case 1: There is the Best Dice

- Suppose there is the best dice
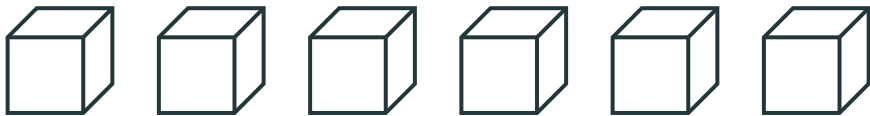
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- Whatever the second player picks is worse

Case 2: There is No Best Dice

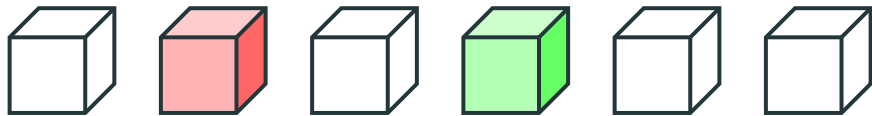- Suppose there is no best dice

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- Suppose there is no best dice

- It means that for any dice there is another one that does not lose to the first one

- Suppose the first player picks one of the dices

- Than the second player can always pick the one that is not worse!

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- In this case you pick your dice second and you choose the dice that is the best against your opponents pick