Conditions

what is the probability of a player getting all the four aces, when playing cards are uniformly distributed among the four players?

Solution

As we know, there are 52 cards in a standard deck. If playing cards are uniformly distributed among the four players, then each player has 13 cards.

The probability of our event is the probability that in 13 cards will be 4 aces.

$$P = 4 \cdot \frac{13}{52}\frac{12}{51}\frac{11}{50}\frac{10}{49} \approx 0{,}01056$$