

Probability and Blackjack

Blackjack, also known as 21, is played around the world. It requires at least two players and can be played with one or more decks of 52 cards. The goal of blackjack is to reach 21 without going over; the player who gets the closest to 21 wins. Every card has a different value.

<u>Card</u>	<u>Points</u>
Ace	1 or 11
King	10
Queen	10
Jack	10
10	10
9	9
8	8
7	7
6	6
5	5
4	4
3	3
2	2
1	1

- 1.) Assume you have one deck of cards and you draw two cards.
 - a. What is the probability of getting exactly 21?
 - b. Is the probability of getting less than 21 higher or lower than getting 21?
 - c. Is the probability of getting more than 21 higher or lower than getting 21?
- 2.) Assume you have three decks of cards and you draw two cards.
 - a. What is the probability of getting exactly 21?
 - b. Is the probability of getting less than 21 higher or lower than getting 21?
 - c. Is the probability of getting more than 21 higher or lower than getting 21?

3.) Does the probability of getting 21 increase or decrease with more decks of cards?