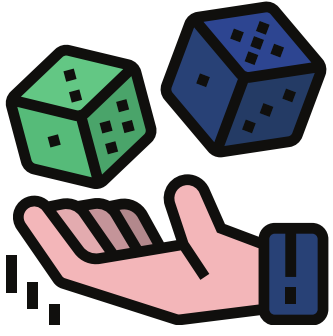
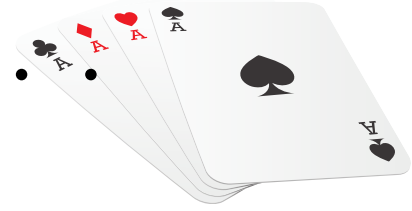


USE YOUR BRAIN



CHANCES ARE.



Probability Puzzles

LIFE HAS NO GUARANTEES, BUT CAN YOU FIGURE OUT WHAT IS MOST LIKELY TO HAPPEN?

The Challenge

If you are a fan of games, you should also be a fan of probability. While some games don't have any chance involved, like chess or go, most games will have some hidden or random information that brings an element of luck. However just because a game has luck doesn't mean there is no skill in it! Most games with chance will still reward the player who understands what is most likely to happen. Flex your math skills to figure out the right move in these puzzles!

What's Your best chance?

1. A bag has 10 pieces in it. 5 are red and 5 are yellow. If you pull out two pieces at the same time, are you more likely to get a pair of the same color or one of each?
2. When rolling two standard dice (numbered 1 to 6) what total are you most likely to get?
3. A deck has cards numbered 1 through 100 with one of each. You and your opponent each receive a card. You have 46. Who is most likely to have the highest card?
4. You flip a coin five times in a row and get heads five times. What are you most likely to flip next time?
5. You have a deck of cards and flip over two cards. They are both hearts. What suit are you most likely to flip next time?
6. There are 10 pieces in a bag. 6 are green and 4 are red. You have a choice to pull a piece from the bag. If you pull a green, you get 10 points. If you pull a red, you lose 12 points. Is pulling from this bag a good deal?
7. You are playing rock, paper, scissors. Your opponent loves rock and throws it 80% of the time. The other 20% of the time they throw scissors. What is your best move against this opponent?
8. A game has four different types of cards in equal amounts. They are worth 1, 5, 10, and 20 points. Is it a good idea to lose 8 points to get a random card?
9. There is a spinner numbered 1-10. You are two spaces away from winning. You have a card that says you can take an extra turn, but if you get an odd number you instead lose your next turn. Your opponent is nine spaces away and goes next. Should you play the card right now?