

DNL Probability

Question 1 Flipping a coin

/ 1

A fair coin has two sides (heads and tails) that are equally likely to show when the coin is flipped.

What is the theoretical probability that a fair coin lands on heads?

Question 2 Flipping a coin

/ 1

Dave flipped a coin 20 times and got heads on 8 of the flips.

Based on Dave's results, what is the experimental probability of the coin landing on heads?

Question 3 Flipping a coin

/ 1

Choose the right answer.

Why aren't the theoretical and experimental results the same?

- Dave's coin is obviously unfair.
- Results from an experiment don't always match the theoretical results, but they should be close after a large number of trials.

Question 4 Flipping a coin

/ 1

Dave continues flipping his coin until he has 100 total flips, and the coin shows heads on 47 of those flips.

Based on these results, what is the experimental probability of the coin landing on heads?

P(Heads) \approx

Question 5 Flipping a coin

/ 1

Choose the right answer.

What do you notice about the experimental probability after Dave continued flipping the coin?

- The experimental probability got closer to the theoretical probability after more flips.
- The experimental probability got farther away from the theoretical probability after more flips.

Question 6 Roll a die

/ 1

A fair die has 6 faces numbered 1 through 6 that are each equally likely to show when the die is rolled.

What is the theoretical probability that a fair die shows a 1?

P(1)=

Question 7 Roll a die

/ 1

Dave is going to roll a die 60 times and see how often a 1 shows.

According to the theoretical probability, how many rolls should Dave expect to show a 1?

Question 8

/ 1

We draw at random a ball in the following bag. Match the events to the probabilities.



Draw a red ball	1/8
Draw a green ball	0
Draw a black ball	3/8
Draw a blue ball	1/2

DNL Probability

Question 9

/ 1

Match the sentences and the expression of their probabilities.

Win to the national lottery.	unlikely
Win to heads and tails.	Impossible
Get 13 with two ordinary dice.	Likely
Get a vowel by drawing a random letter from the alphabet	Very likely
Get a consonant by drawing a random letter from the alphabet	One chance out of two
Win or lose to the national lottery.	Certain
The math teacher knows his multiplication tables	Very unlikely

Question 10

/ 1

Check off the correct answer(s). A probability is

- Chance
- One chance out of two.
- A percentage
- An outcome of a random experiment.
- A number between 0 and 1.

Question 11

/ 1

When all the outcomes of a random experiment have the same probability of being realized, we say that it is a situation of (without capital letters)

Question 12

/ 1

How many outcomes are there in the following random experiment: Randomly draw a ball into the bag shown below and look at the colour obtained.



Question 13

/ 1

In a class of 30 students, there are 17 girls and 13 boys. I choose a student at random and I note in which group it belongs. How many outcomes are there to this experiment?

Question 14

/ 1

In a class of 30 students, there are 17 girls and 13 boys. I choose a student at random. What is the probability that it is a girl?

(Answer given as fraction without space example 3/4)

Question 15

/ 1

In a group, there are 7 girls and 4 boys. I choose a random person. What is the probability that it is a girl?

(Answer given as fraction without space example 3/4)

DNL Probability

Question 16

/ 1

In the following script, what is the probability that the sprite says " I win"?

(Answer given as fraction without space example 3/4)



Question 17

/ 1

A game announces "1 in 4 chance of winning". If I play 4 times, then I'm sure to win.

- Wrong
 Right

Question 18

/ 1

A game announces "1 in 4 chance of winning" What is the probability of losing? (Answer given as fraction without space example: 1/5)

Question 19

/ 1

In my standard deck of 52 playing cards I draw a card at random and then, **without putting it back**, I draw a second card always randomly. In the first draw I got the jack of diamonds. What is the probability of getting a spades at the second draw? (Answer given as a fraction without space example 1/5)

Question 20

/ 1

In my standard deck of 52 cards I draw a card at random and then, **without putting it back**, I draw a second always randomly. In the first draw I got the 8 of clubs. What is the probability of getting a clubs at the second draw? (Answer given as a fraction without space example 1/5)

Question 21

/ 1

Alice, Bob and Chuck each have a bag containing marbles. Everyone randomly draws a ball from his bag. The contents of the bags are as follows: Alice's bag: 5 red Bob's bag: 10 red and 30 black Chuck bag: 10 red and 3 black. Who is most likely to shoot a red ball?

- Chuck
 Alice
 Bob

Question 22

/ 1

I draw a card in a standard deck of 52 playing cards. Match the events that are mutually exclusive (or disjoint).

- | | |
|------------------------|---------------------------|
| Draw a diamonds | Draw a clubs |
| Draw an ace or a Jack. | Draw a Jack. |
| Draw a face card. | Draw a 10 or an ace. |
| Draw a king. | Draw the King of diamonds |