

0.17

In a game, a die numbered 9 through 14 is rolled **once**.  
What is the probability that the die will land on a 9 or an  
even number?

$4/6$  or  $2/3$

Mark has 3 toy horses, 4 toy cars, and 5 toy figures in his bag. What is the probability of selecting a toy car or a toy figure from his bag?

$9/12$  or  $3/4$

Express the probability in which the letter P or I is selected from the word PLAYING.

$2/7$

A shop has 15 balloons: 4 are green, 6 are red, and 5 are yellow. What is the probability that we will pick a red balloon and then a green balloon after picking twice and NOT replacing the first pick?

$24/210$  or  $12/105$  or  $4/35$

A coin is flipped 600 times, how many times would you predict that the coin will land on heads?

300

You want to estimate the number of students in your school who prefer to bring a lunch from home rather than buy one at school. You survey five students who are standing in the lunch line. Determine whether the sample is biased (meaning, not reliable) or unbiased (meaning, reliable).

Biased

In a survey of 50 students, 10 like the color red, 20 like the color blue, 15 like the color orange and 5 like the color yellow.

Predict how many students will like the color blue if 1,000 students are surveyed.

400

A six-sided number cube labeled 1-6 is rolled. If you roll the die 240 times, predict how many times the cube will land on an odd number.



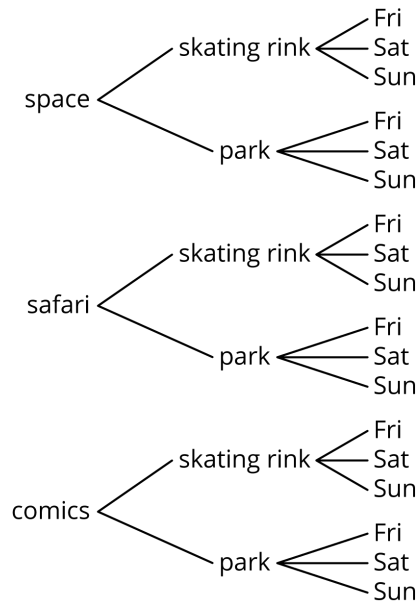
120

A textbook has 428 pages numbered in order starting with 1. You flip to a random page in the book in a way that it is equally likely to stop at any of the pages.

What is the probability that you turn to an even numbered page?

214/428 or 1/2

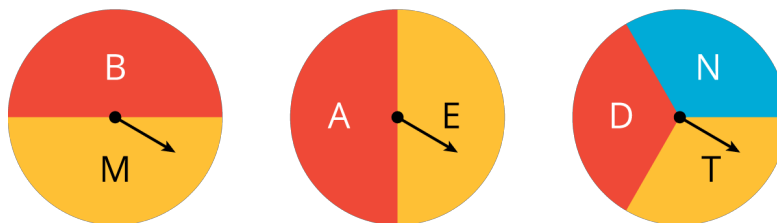
Noah is planning his birthday party. Here is a tree showing all of the possible themes, locations, and days of the week that Noah is considering.



How many different possible outcomes are in the sample space?

18

Jack was asked to spin the 3 spinners below. Each combination of 3 spins counts as a single outcome. How large is the sample space?



12

Diego chooses rock, paper, or scissors, and Jada chooses rock, paper, or scissors. How large is the sample space?

9

Lin selects one type of lettuce and one dressing to make a salad.

Lettuce types: iceberg, romaine

Dressings: ranch, Italian, French

What is the probability that she chooses a salad with French dressing?

1/3

A simulation is done to represent kicking 5 field goals in a single game with a 72% probability of making each one. A 1 represents making the kick and a 0 represents missing the kick.

trial	result
1	10101
2	11010
3	00011
4	11111
5	10011

Based on these results, estimate the probability that 3 or more kicks are made.

4/5

A vending machine has 5 colors (white, red, green, blue, and yellow) of gumballs and an equal chance of dispensing each. A second machine has 4 different animal-shaped rubber bands (lion, elephant, horse, and alligator) and an equal chance of dispensing each. If you buy one item from each machine, what is the probability of getting a yellow gumball and a lion band?

$1/20$

When rolling 3 standard number cubes, the probability of getting all three numbers to match is  $\frac{6}{216}$ . What is the probability that the three numbers do not all match?



$$\frac{210}{216}$$

Select a month. Then select 2020 or 2025. How large is the sample space?

24

If 6 coins are flipped, find the probability that there is at least 1 heads.

$$\frac{63}{64}$$

A letter of the English alphabet is followed by a digit from 0 to 9. How large is the sample space?

Tyler wonders what proportion of students at his school would dye their hair blue if their parents would let them. He surveyed a random sample of 10 students at his school, and 2 of them said they would. Kiran didn't think Tyler's estimate was very accurate, so he surveyed a random sample of 100 students, and 17 of them said they would.

Find the most accurate estimate for the probability that a student would dye their hair blue.

