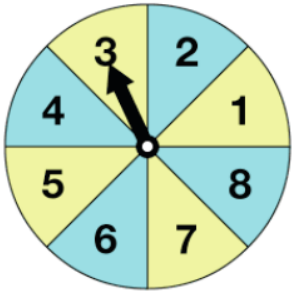
Probability

Common Core Aligned

Task-Cards

Ariel spins the spinner shown below three times. What is the probability that she lands on a number greater than 6 all three times? Write your answer as a fraction



E

A bag contains 6 white marbles and 4 black marbles. You pick out a marble, record its color, and put the marble back in the bag. If you repeat this process 160 times about how many times do you expect to remove a white marble from the bag?

R

To win a game, Sara must spin two blues in a row. What is the probability that Sara will win the game? Write your answer as a fraction.

W

Karl flips the two coins below. What is the probability that he flips heads on both coins? Write your answer as a fraction.

S

A survey reveals that one airline's flights have an 89% probability of being on time. If this airline schedules 5,000 flights in a year, how many flights would you predict to NOT arrive on time?

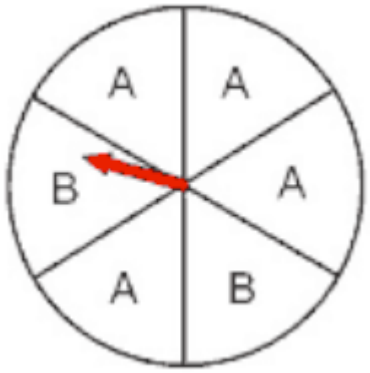
T'

The tables below show the results of an experiment done by Ms. Taffy. In the experiment, she pulled a marble from a sack, recorded its color, and put the marble back into the sack. If there were a total of 100 marbles in the bag, how many red marbles would you expect to be in the bag?

Outcome	Frequency
Red	7
Blue	8
Green	5

E

What is the probability of spinning "A" on the spinner below? Write your answer as a percent rounded to the nearest whole number.



O

What is the probability of pulling a pink flower from the vase? Write your answer as a percent rounded to the nearest whole number.

A

Gavin drew blocks at random from a bag for a probability experiment and returned the block to the bag after each draw. The table below shows his results.

Draw	1	2	3	4	5	6	7	8	9	10
Color	Green	Blue	Green	Green	Red	Green	Red	Red	Red	Blue

He plans to complete an additional 30 draws. How many green blocks should Gavin expect to draw in the net 30 draws?

N

What is the probability of landing on a number that is both a factor of 12, and a multiple of 2? Express your answer as a percent rounded to the nearest whole number

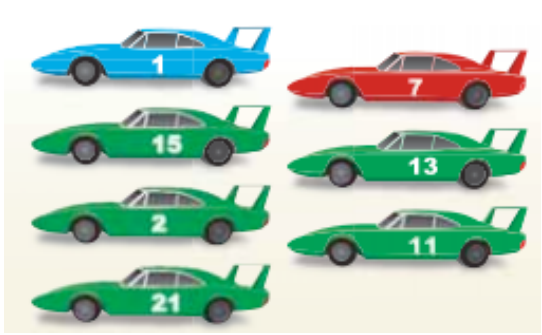
E

What is the probability of pulling a blue pin from the jar below? Write your answer as a percent.

12 Green
6 White
8 Red
4 Blue
10 Yellow

I

Marcus and Mario go to the go-cart track. They will each pick their own car from the options below. What is the probability that they both pick a car that has a number larger than 10? Write your answer, as a fraction is simplest form.



B

D'Angelo made 25 out of 32 free throws he attempted. What is the experimental probability that he will make his <u>next two</u> free throws? Write your answer as a percent

M

A police officer keeps record of 75 drivers at a stop sign. They observe 21 people who came to a complete stop, 46 who made a rolling stop, and 8 who did not appear to brake at all. What is the probability that a randomly selected driver will come to a complete stop? Write your answer as a percent?

B

A weather forecaster predicts that there is a 30% chance of rain on Saturday, and a 40% chance of rain on Sunday. What is the probability that it will rain on both Saturday and Sunday? Write your answer as a percent.

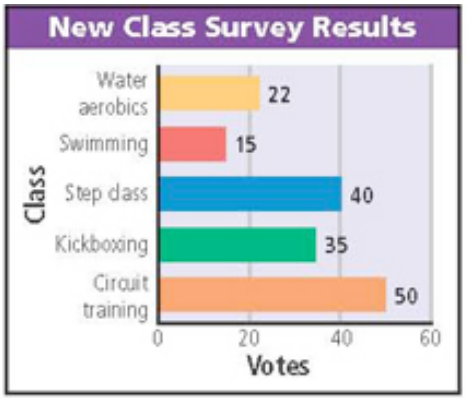
U

At clothing company, and inspector finds 5 defective pairs of jeans in a shipment of 200 jeans.

About how many would you expect to be defective in a shipment of 5,000 pairs of jeans?

T

Members of a fitness club were surveyed to see what classes should be offered in addition to the current classes. If a member is selected at random, what is the probability that they would pick kickboxing as the class to add? Write your answer as a percent rounded to the nearest whole number.

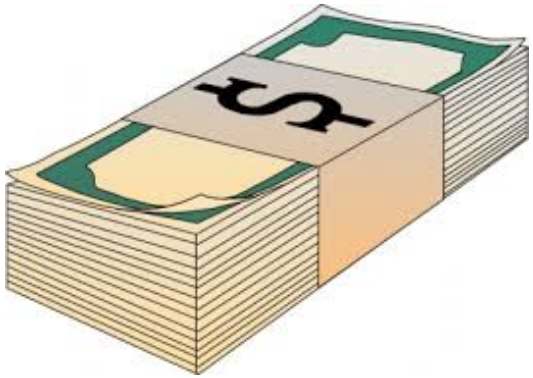


A

A bag of marbles contains 3 green, 6 red, 6 blue, and 1 yellow marble. If Juan randomly selects two marbles to use for a game, what is the probability that both marbles are blue? Write your answer as a fraction.

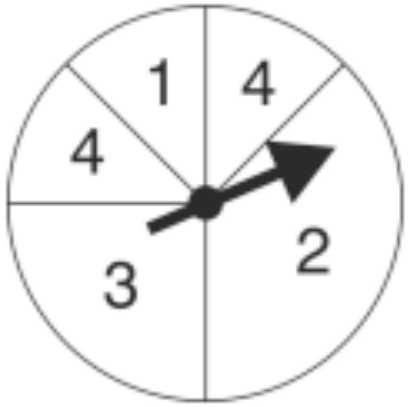
E

Harry has five $1 bills, three $10 bills, and two $20 bills in her wallet. She picks two bills at random. What is the probability of her picking the two $20 bills? Write your answer as a fraction.



Y

What is the probability of spinning an even number on the spinner below? Write your answer as a percent.



L

There is a 0.03 chance than Lena will win the raffle at school. What is the probability that Lena will NOT win the lottery? Write your answer as a percent.

A

Andrew has a bag with 100 cards each marked with a letter. There are 10 cards in the bag that are marked with the letter "E". Andrew picks 1 card at random from the bag. The card he pulls is marked with the letter "E". He does not put it back into the bag. What is the probability that the next card Andrew pulls will be marked with the letter "E"? Write your answer as a fraction in simplest form.

S

What is the probability of pulling a red marble from the bag, replacing it, and then pulling another red marble? Write your answer as a fraction in simplest form.

S

Rafael's Spinner Results

Color	Frequency
Blue	46
Red	105
Green	49

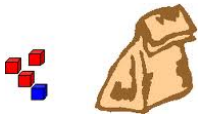
Rafael performed an experiment by spinning a spinner 200 times and recording the results in the table above. If he is going to spin the spinner 40 more times, how many times should he expect to land on red?

P

Tom will conduct a probability experiment by removing a cube from a bag of colored cubes that are all the same size and shape. Tom will use the following procedure.

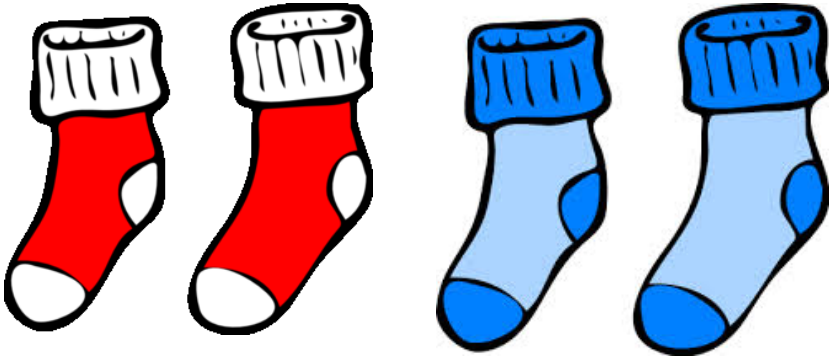
- Without looking, remove a cube.
- Record its color.
- Put it back in the bag.
- Repeat the experiment.

The probability of drawing a green cube is $\frac{3}{5}$. What is the probability of drawing three green cubes in a row? Write your answer as a percent rounded to the nearest whole number.



B

A drawer is filled with red and blue socks. If the probability of randomly selecting a red sock is 3/8, what is the probability of randomly selecting a blue sock? Write your answer as a fraction.

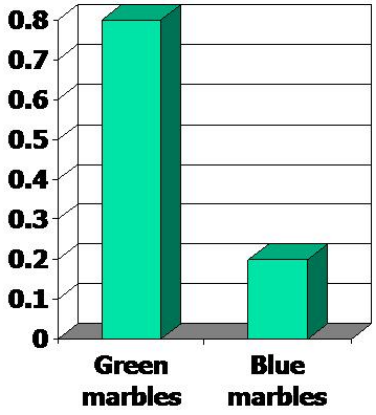


I

One bag contains 2 green marbles and 4 white marbles, and a second bag contains 3 green marbles and 1 white marble. If Nathaniel randomly draws one marble from each bag, what is the probability that they are both white? Write your answer as a fraction.

T

The bar graph displays the probability of selecting a green or a blue marble from a bag of marbles. If there are 36 blue marbles in the bag, how many green marbles are in the bag?



Y

A homeroom class has 25 students. The table shows the probability that a student selected randomly from the class participate in certain activities

Activity	Student Council	Soccer	Lacrosse
Probability	0.2	0.35	0.32

What is the probability that a student will participate in both student council and lacrosse? Write your answer as a percent rounded to the nearest whole number

E

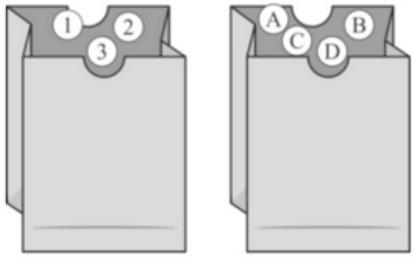
In an experiment, each of two people has six cards labled 1 through 6. The first person chooses a card from set one, while the second person chooses a card from set two.What is the probability that the two people will choose the same card? Write your answer as a percent, rounded to the nearest whole number.

Set One

Set Two

G

Nick has one bag that contains three table-tennis balls numbered 1,2 and 3. He also has a second bag that contains four table-tennis balls lettered A, B, C and D.



When Nick randomly selects one ball from each bag, what is the probability that he will select a table-tennis ball with a 1 on it and also a table-tennis ball with a B on it? Write your answer as a percent rounded to the nearest whole number.

T

Brooke chooses fom the following to decorate a room:

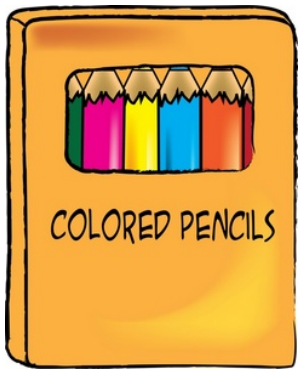
- 4 choices of paint colors (blue, green, pink, white)
- 2 choices of borders (flowers, cats)
- 3 sets of curtains (white, pink, blue)

Brooke will randomly choose 1 paint color, 1 boarder, and 1 set of curtins. What is the probability that Brooke will pick blue paint, a flower border, and white curtains?

Write your answer as a fraction.

R

A box contains 4 red pencils, 3 blue pencils, and 3 yellow pencils. What is the probability that a student randomly selects a blue pencil, keeps it, and then a second student randomly selects a red pencil? Write your answer as a percent rounded to the nearest whole number.



N

Maggie and Scout are among 12 students who have applied for a trip to Washington D.C. Two students from the group of 12 will be selected at random for the trip. What is the probability that Maggie and Scout will be the 2 students selected?

N

A new store is giving away free backpacks at the grand opening. The backpacks come in three sizes (small, medium, large), three colors (yellow, red, blue) and with or without wheels.

The first winner selects a new backpack at random. What is the probability that the backpack is large, blue, and has wheels? Write your answer as a fraction.

D

Andrew made 75% of the free-throws that he takes during the basketball season, and 30% of the 3-point shots that he takes. If Andrew takes one free-throw, and one 3-point shot, what is the probability that he makes both? Write your answer as a fraction.

I

Why did the right triangle go to the pool?

10%	$\frac{1}{6}$	61	$\frac{1}{16}$	22%	$\frac{1}{4}$	14%	12	$\frac{5}{8}$	13%	6%	125	144	$\frac{2}{19}$	$\frac{1}{18}$	35	17%	$\frac{1}{24}$	$\frac{1}{8}$	$\frac{1}{64}$	$\frac{1}{11}$

Do you know a joke about statistics?

21	96	67%	22%	43%	28%	63%	$\frac{1}{45}$	$\frac{3}{7}$	$\frac{2}{7}$	12%	8%	39	$\frac{9}{40}$	550	$\frac{1}{36}$	72%	61%	38%	97%	$\frac{1}{66}$