

QUESTION 1

A bag contains 5 blue marbles, 2 yellow marbles, and 3 red marbles.

The probability of selecting a red marble, and then another red marble at random, one after the other without replacement is $\frac{1}{15}$ ✓

QUESTION 2

A bag contains 5 blue marbles, 2 yellow marbles, and 3 red marbles.

The probability of selecting a red marble, and then a yellow marble at random, one after the other without replacement is $\frac{1}{15}$ ✓

QUESTION 3

A bag contains 5 blue marbles, 2 yellow marbles, and 3 red marbles.

The probability of selecting a blue marble, and then a red marble at random, one after the other without replacement is $\frac{1}{6}$ ✓

QUESTION 4

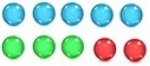
A bag contains 5 blue marbles, 2 yellow marbles, and 3 red marbles.
The probability of selecting a blue marble, and then a yellow marble, one after the other, without replacement is

$\frac{1}{9}$ ✓

- $\frac{1}{5}$
- $\frac{1}{8}$
- $\frac{1}{2}$

QUESTION 6

A bag contains 5 blue marbles, 3 green marbles, and 2 red marbles.
What is the probability of selecting 2 blue marbles at random, one after the other, without replacement?



$\frac{1}{4}$

$\frac{1}{2}$

$\frac{1}{9}$

$\frac{1}{9}$ ✓

QUESTION 7



Hamda is using a 2-digit password to secure her personal folder on the computer.

She uses numbers 0 to 9 to select her password.

In total, Hamda can select different 2-digit passwords.



The probability that Hamda is using 04 as her password is %

QUESTION 8



A coin is flipped 3 times. What is the probability of landing 2 heads and 1 tail in this order?

$\frac{1}{8}$

$\frac{1}{2}$

$\frac{1}{4}$

$\frac{1}{6}$

QUESTION 8



A coin is flipped 3 times. What is the probability of landing 2 heads and 1 tail in this order?

$\frac{1}{8}$ ✓

$\frac{1}{2}$

$\frac{1}{4}$

$\frac{1}{6}$

QUESTION 9



Find the number of permutations:

$P(4, 3) = 24$ ✓

QUESTION 10



Find the number of permutations:

$P(100, 2) = 9900$ ✓

Hassan organizes his first 3 after school classes.

He has 5 different classes to choose from, and the classes will not be repeated.

Therefore, Hassan has different arrangements to organize his after school classes.

QUESTION 12

Latifa organizes her first three after school clubs.

Her choices are running, arts and tennis.

There are different arrangements for Latifa to organize her after school clubs, of three classes.

QUESTION 13

QUESTION 13

Find the number of permutations:

$P(3, 3) =$ ✓

QUESTION 14

Find the value of:

$P(10, 2) =$ ✓

QUESTION 15

Use the fundamental counting principle, to find $P(5, 2)$.

$P(5, 2) =$ ✓

The number of permutations for $P(5, 4)$ is ✓.

QUESTION 17

The password to access your smartphone must be a two-digit number.

The digits chosen are from 0 to 5, and are not repeated.

There are a total of ✓ passwords, if the numbers are not repeated.

QUESTION 18

There are ✓ permutations when making a 2 digit number using 1, 4, 5, 6, 7 and 8 without repetitions.

QUESTION 19

QUESTION 19

Fatema is making an arrangement using one balloon, one flower and one chocolate bar from the available options below.

Fatema can make different arrangements.

The probability that Fatema will choose a pink balloon, a rose, and a white chocolate bar is %

Balloon	Flower	Chocolate bar
Red		Dark chocolate
White		Milk chocolate
Pink	Rose	Chocolate with strawberries
Blue	Tulip	Chocolate with nuts
Green		White chocolate

QUESTION 20

Khalifa can make a screen name for his video game character by choosing a name, then a number, then a symbol from the available choices below.

Khalifa has choices for the screen name.

The probability that Khalifa chooses Strong115 is .

Name	Number	Symbol



Khalifa can make a screen name for his video game character by choosing a name, then a number, then a symbol from the available choices below.

Khalifa has 48 choices for the screen name.

The probability that Khalifa chooses Strong115 is $\frac{1}{48}$.

Name	Number	Symbol
Hero	11	5
Smart	12	!
Strong	13	@
Fast	14	

QUESTION 21

Ali can make a screen name for his video game character by choosing a name, then a number, then a symbol from the available choices below.

In total, Ali has 60 choices for the screen name.

The probability that Ali chooses Hero12@ is $\frac{1}{60}$.

Name	Number	Symbol
Hero	11	5
Smart	12	!
Strong	13	@
Fast	14	
King		

You flip 3 coins. What is the probability of landing 3 heads?

$\frac{1}{8}$ ✓

$\frac{1}{2}$

$\frac{1}{4}$

$\frac{1}{6}$

QUESTION 23

Mustafa is planning for a trip.

He wants to choose a hotel, and a car to rent.

A website provides 10 different hotel choices and 2 different cars.

Therefore, Mustafa has ✓ different hotel and car options to choose from, if he selects one hotel, and one car.

QUESTION 24

QUESTION 24

Abdulla has 5 shirts and 5 ties as shown below.

He can make 25 shirt and tie outfits if he wants to select one shirt and one tie.

The probability that Abdulla chooses a white shirt and a gray tie is $\frac{1}{25}$.

Shirt	Tie
Black	Red
White	Blue
Red	Brown
Green	Gray
Blue	navy

QUESTION 25

In total, there are 12 possible outcomes for flipping a coin, and rolling a number cube.

The probability of flipping a heads, and rolling a 6 is $\frac{1}{12}$.

QUESTION 26

QUESTION 26



The given coin is flipped, and the given spinner is spun.

Find the total number of possible outcomes, when the coin is flipped and the spinner is spun?



3

5

2

6 ✓

QUESTION 27



A coin is flipped and a number cube is rolled.

In total, there are possible outcomes.

The probability of landing tails and rolling a 3 is .

QUESTION 28



QUESTION 28



The probability of obtaining 3 tails and one head in this order, when flipping 4 coins is ✓.

- $\frac{1}{3}$
- $\frac{1}{4}$
- $\frac{1}{2}$

QUESTION 29



A number cube is rolled 3 times.

In total, there are ✓ possible outcomes.

The probability of rolling a 6 three times is ✓.

QUESTION 30



Fatema is making an arrangement using one balloon, one flower and one chocolate bar from the available options below.

Fatema can make different arrangements.

The probability that Fatema will choose a red balloon, a rose, and a dark chocolate bar is %

Balloon	Flower	Chocolate bar
Red White	Rose Tulip	Dark chocolate Milk chocolate Chocolate with strawberries Chocolate with nuts White chocolate

QUESTION 31

Khalifa is shopping for a new smartphone. He has 3 decisions to make about his new phone - the quality, color and data storage capacity. The choices are listed.

Quality: new or used

Color: black, white, silver, pink, or navy

Data storage capacity: 64 GB, 128 GB, 256 GB, or 512 GB

In total, Khalifa has different phone options to choose from.

The probability of choosing a new, navy phone with 64 GB is .

A pizza restaurant offers 2 types of dough and 5 types of dipping sauce. You choose one type of dough, and one dipping sauce.

With these choices, there are different pizza choices that could be made.

The probability of choosing a thin crust dough, and garlic sauce is .

Dough	Sauce
Thin crust	Garlic
Normal	Tomato
	Basil
	Mustard
	Mayonnaise

QUESTION 33

When you roll 2 number cubes, there are possible outcomes.

The probability of rolling a 6, followed by another 6 is .



QUESTION 34

QUESTION 34

Hani has 8 shirts and 5 ties as listed below.
Hani will choose one shirt and one tie.

In total, he has possible shirt and tie choices, given Hani will choose one shirt and one tie.

The probability that Hani chooses a white shirt and a tie is .

Shirt	Tie
Black	
White	Blue
Red	Gray
Brown	Brown
Silver	Red
Green	Green
Navy	
Blue	

QUESTION 35

A pizza restaurant offers 2 types of dough, and 3 types of pizza sauce.
You can choose a type of dough, and a sauce to make your pizza.

A pizza restaurant offers 2 types of dough, and 3 types of pizza sauce.
You can choose a type of dough, and a sauce to make your pizza.

With these choices, there are different types of pizza options.

The probability of choosing a pizza with tomato sauce is .

Dough	Sauce
Thin crust	Garlic
Normal	Tomato
	Basil

QUESTION 36

When you roll 2 number cubes, there are possible outcomes.

The probability of rolling a 3 followed by another 3 is .

QUESTION 37

Sara has 7 dresses and 4 sunglasses as shown below.
She wants to choose a dress and a pair of sunglasses for her outfit.

QUESTION 37



Sara has 7 dresses and 4 sunglasses as shown below.

She wants to choose a dress and a pair of sunglasses for her outfit.

In total, Sara has different dresses, and sunglasses outfits to choose from.

The probability that Sara chooses a black dress and black sunglasses is .

Dress	Sunglasses
Black	
White	Black
Red	White
Pink	Brown
Purple	Pink
Blue	
Yellow	

QUESTION 38



Maha has 6 dresses and 3 sunglasses as shown in the table.

She wants to choose a dress and a pair of sunglasses for her outfit.

Dress	Sunglasses
Black	

QUESTION 38

Maha has 6 dresses and 3 sunglasses as shown in the table.
She wants to choose a dress and a pair of sunglasses for her outfit.

In total, she has possible dresses and sunglasses outfits.

The probability that Maha chooses a white dress and pink sunglasses is .

Dress	Sunglasses
Black	
White	Black
Red	White
Pink	Pink
Purple	
Blue	

QUESTION 39

The probability of obtaining 3 heads when flipping 3 coins is .

**QUESTION 40**

QUESTION 40



Describe the likelihood of flipping two coins and obtaining 2 tails.



likely

unlikely ✓

certain

impossible

QUESTION 41



The probability of obtaining 3 tails when flipping 3 coins is .

This event is to occur.



QUESTION 42



QUESTION 43



Hamad is planning for a trip.

He will choose a hotel, and a car to rent.

The table shows a list of 10 different hotel options, and 5 different car options that Hamad will choose from.

In total, Hamad has possible hotel and car choices.

The probability that Hamad will choose Hotel M and Car J from the available choices is %

Hotel	Car
Hotel A	Car B
Hotel C	Car D
Hotel E	Car F
Hotel G	Car H
Hotel I	Car J
Hotel K	
Hotel M	
Hotel O	
Hotel Q	
Hotel S	

QUESTION 44



Mustafa is planning for a trip. He chooses a hotel, and a car to rent.

A website provides 5 different hotel choices, and 2 different cars.

In total, Mustafa has different hotel and car choices.

Hotels choices	Car choices
City Hotel	Sports Car
Family Hotel	Family Car
Park Hotel	
Amusement Park Hotel	
Beach Hotel	

The probability that Mustafa will choose City Hotel and a Sports Car from the available choices is %.

QUESTION 45



The number of permutations for $P(8, 2)$ is .

QUESTION 46



The password to access your home must be a three-digit number.
The digits chosen can only be 0, 1, 2, 3, 4 or 5.

QUESTION 46



The password to access your home must be a three-digit number.
The digits chosen can only be 0, 1, 2, 3, 4 or 5.

How many passwords can be created, if the digits are not repeated?

- 9
- 120
- 18
- 60

QUESTION 47



The number of permutations for $P(4, 3)$ is .

QUESTION 48



The number of permutations for $P(8, 3)$ is .

There are permutations when making a 3 digit number using 1, 4, 5, 6, 7 and 8 without repetitions.

QUESTION 60

There are permutations when making a 3 digit number using 1, 4, 5 and 8 without repetitions.

QUESTION 61

Saeed chooses 1 manakeesh, and 1 drink from the following choices;

- Manakeesh - Cheese
- Drink - Water, Juice

Find all the possible outcomes in this sample space. What is the probability of choosing a Cheese manakeesh with a Juice?

$\frac{1}{4}$

$\frac{1}{3}$

$\frac{1}{2}$

$\frac{1}{6}$

Halima chooses 1 pizza and 1 drink from the following choices;

Pizza - Cheese or Spicy
Drink - Milkshake, Juice or Cola

Find all the possible outcomes in this sample space. What is the probability of Halima choosing a Spicy pizza with a Cola?

- $\frac{1}{8}$
- $\frac{1}{6}$ ✓
- $\frac{1}{4}$
- $\frac{1}{3}$

QUESTION 63

Eman chooses 1 pizza and 1 drink from the following choices;

Pizza - Cheese or Spicy
Drink - Milkshake or Cola

Use a list, to write down all the possible outcomes in this sample space.
What is the total number of outcomes in the sample space?

- 4 ✓
- 2
- 5
- 3

A coin is flipped, and a 3 sided spinner is rolled.
The spinner is numbered 1, 2 and 3.
Use a list, to write down all the possible outcomes in this sample space.

What is the total number of outcomes in the sample space?

- 5 4 3 6 ✓

QUESTION 65

Tahir and Mustafa are sitting together in a row.
Use a list, to find the sample space for the different ways they can sit in a row.

What is the total number of outcomes in the sample space?

- 4 1 3 2 ✓

QUESTION 66

Sheikha is at the beach collecting sea shells. She collects 12 brown, 9 green, and 4 sea shells.

Sheikha is at the beach collecting sea shells. She collects 12 brown, 9 green, and 4 sea shells.

She plans to collect 500 sea shells, so she can share them with all her friends.

Sheikha would expect to collect brown sea shells.

- 100
- 150
- 500

QUESTION 57



A small cafe sold 80 cups of tea in a day, and 32 of those cups of tea were green tea.

At the end of the week, if 160 cups of tea are sold in two days, then we expect cups of green tea to be sold.

- 112
- 80
- 32

QUESTION 58



QUESTION 68



Ahmed's coffee shop sold 10 cups of coffee, and 2 of those cups of coffee were cappuccinos.

At the end of the day, if 200 cups of coffee are sold, then Ahmed would expect cups of cappuccino to be sold.

QUESTION 69



Mansour needs to buy colored pencils.

He buys 1 red, 2 yellow and 2 blue pencils.
In total, he will buy 25 colored pencils.

How many yellow pencils will Mansour expect to buy?

- 10 20 5 15

QUESTION 60



Mansour needs to buy colored pencils.

Mansour needs to buy colored pencils.

He buys 1 red, 2 yellow and 2 blue pencils.
In total, he will buy 25 colored pencils.

How many red pencils will Mansour expect to buy?

- 20 15 5 10

QUESTION 61



Mansour needs to buy colored pencils.

He buys 1 red, 2 yellow and 2 blue pencils.
In total, he will buy 25 colored pencils.

How many blue pencils will Mansour expect to buy?

- 20 5 15 10

QUESTION 62



Haya is preparing a snack bag for her friends.
Inside each bag, there is 1 apple, 6 pieces of candy, 3 cheese sticks, and 10 strawberries.

Haya is going to buy 400 snacks.

How many apples will Haya expect to buy ?

- 50
- 70

- 20
- 60

QUESTION 63

Haya is preparing a snack bag for her friends.
Inside each bag, there is 1 apple, 2 oranges, 3 bananas, 4 strawberries and 10 dates. Haya is going to buy 400 snacks.

How many oranges will Haya expect to buy ?

- 50
- 100

- 75
- 40

A bag contains 10 white counters and 15 black counters.
Ali will select a counter at random and write down its color.

If Ali repeats this 300 times, how many white counters should he expect to write down?

- 200
- 140
- 120 ✓
- 250

QUESTION 65

Muza is preparing a snack bag for her friends.

Inside each bag, there are 6 carrot sticks, 4 oranges, and 10 dates.

Muza is going to buy 300 snacks.

Muza will expect to buy ✓ dates.

QUESTION 66

In the front of the store, Sultan always stocks 10 bottles of water, 6 bottles of juice, and 4 bottles of cola.
He will order 500 bottles to be arranged at the front of his store.

In the front of the store, Sultan always stocks 10 bottles of water, 6 bottles of juice, and 4 bottles of cola.
He will order 500 bottles to be arranged at the front of his store.

How many cola bottles will Sultan expect to order?

- 150
 100
 200
 50

QUESTION 67

Hamda is at the beach, and picks up 10 white rocks, 7 grey rocks, and 3 black rocks.
She is going to collect 200 rocks in total.

How many grey rocks should Hamda expect to collect?

- 60
 50
 40
 70

QUESTION 68

A bag contains 10 white counters and 15 black counters.
Ali selects a counter at random, and will write down its color.

QUESTION 68



A bag contains 10 white counters and 15 black counters.
Ali selects a counter at random, and will write down its color.

If Ali repeats this 300 times, how many black counters should he expect ?

- 120 210 150 180 ✓

QUESTION 69



Haya is preparing a snack bag for her friends.
Inside each bag, there is 1 apple, 2 oranges, 3 bananas, 4 strawberries and 10 dates.
Haya is going to buy 400 snacks.

How many strawberries will Haya expect to buy ?

- 80 ✓ 100 40 60

QUESTION 70



QUESTION 70



Haya is preparing a snack bag for her friends. Inside each bag, there is 1 apple, 2 oranges, 3 bananas, 4 strawberries and 10 dates.

Haya is going to buy 400 snacks. How many bananas will Haya expect to buy?

120

60



100

80

QUESTION 71



Haya is preparing a snack bag for her friends.

Inside each bag, there is 1 apple, 2 oranges, 3 bananas, 4 strawberries, and 10 dates.

Haya is going to buy 400 snacks.

How many dates will Haya expect to buy?

200



50

150

100



QUESTION 72



QUESTION 72

In front of the store, Sultan always stocks 10 bottles of water, 6 bottles of juice, and 4 bottles of cola. He will order 500 bottles to be arranged at the front of his store.

How many juice bottles will Sultan expect to order?

- 50
- 100
- 200
- 150 ✓

QUESTION 73

Hamda is at the beach. She picks up 10 white rocks, 7 grey rocks, and 3 black rocks. She is going to collect 200 rocks in total.

How many black rocks should Hamda expect to collect?

- 50
- 40
- 30 ✓
- 60

QUESTION 74

Hamda is at the beach. She picks up 10 white rocks, 7 grey rocks, and 3 black rocks.

QUESTION 74

Hamda is at the beach. She picks up 10 white rocks, 7 grey rocks, and 3 black rocks.
She is going to collect 200 rocks in total.

How many white rocks should Hamda expect to collect?

- 200 150 50 100 ✓

QUESTION 75

In front of the store, Sultan stocks 10 bottles of water, 6 bottles of juice, and 4 bottles of cola.

He will order 500 bottles to be arranged at the front of his store.

How many water bottles will Sultan expect to order?

- 250 ✓ 300 400 350



QUESTION 76

QUESTION 76



A bag contains 4 green marbles, 5 blue marbles, and 1 red marble.

If you choose 1 marble at random, what is the probability of selecting a blue, red, or green marble?

- 0.6 0.5 0.1 1 ✓

QUESTION 77



A bag contains 4 green marbles, 5 blue marbles, and 1 red marble.

If you choose 1 marble at random, what is the probability of selecting a red or a blue marble?

- 0.4 0.5 0.1 0.6 ✓

QUESTION 78



A regular, unbiased number cube is rolled once.

QUESTION 78

A regular, unbiased number cube is rolled once.

What is the probability of rolling an odd number?

- 0.4
- 3
- 0.5 ✓
- 0.3

QUESTION 79

A regular, unbiased number cube is rolled once.

What is the probability of rolling a multiple of 3?

- $\frac{1}{4}$
- $\frac{3}{4}$
- $\frac{2}{3}$
- $\frac{1}{3}$ ✓

QUESTION 80

A regular, unbiased number cube is rolled once.

QUESTION 80

A regular, unbiased number cube is rolled once.

What is the probability of rolling a prime number?

$\frac{1}{10}$

$\frac{1}{2}$ ✓

$\frac{1}{3}$

$\frac{1}{4}$

QUESTION 81

A regular, unbiased number cube is rolled once.

Find the probability of rolling an even number.

0.3

0.1

1

0.5 ✓

QUESTION 82

The given spinner is spun once.



QUESTION 82

The given spinner is spun once.
What is the probability of the spinner landing on red or green?

 50% ✓ 20% 40% 25%

QUESTION 83

A bag contains 4 green marbles, 5 blue marbles and 1 red marble.

If you choose 1 marble at random, what is the probability of getting a yellow marble?

 0.6 0.1 0 ✓ 0.5

QUESTION 84

A coin is tossed once.

What is the probability of tossing a coin and getting heads or tails?



A coin is tossed once.

What is the probability of tossing a coin and getting heads or tails?



- 2%
- 20%
- 50%
- 100% ✓

QUESTION 86

The given spinner is spun once.

What is the probability of landing blue or green?



- 5%
- 62.5% ✓
- 6.25%
- 50%

QUESTION 86

The given spinner is spun once.

What is the probability that the spinner will land on blue or green?



QUESTION 86

The given spinner is spun once.
What is the probability that the spinner will land on blue or green?



- 0.1 0.8 0.4 0.5

QUESTION 87

A regular, unbiased colored spinner is spun once.
Given the spinner, what is the probability that the spinner will land on a yellow, red or green?



- 0.70 0.50 0.75 0.25

QUESTION 88

QUESTION 88

A regular, unbiased colored spinner is spun.

Given the spinner, the probability of getting a yellow or blue is $\frac{1}{2}$ ✓



QUESTION 89

A regular, unbiased colored spinner is spun once.

Given the spinner, find the probability of the spinner landing on red or yellow.



0.375 ✓

0.875

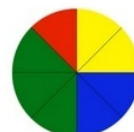
0.625

0.125

QUESTION 90

QUESTION 80

A regular, unbiased colored spinner is spun once.
Given the spinner, find the probability of the spinner landing on a green or blue.



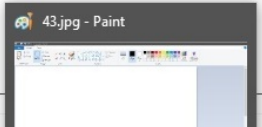
- $\frac{3}{8}$
- $\frac{7}{8}$
- $\frac{1}{8}$
- $\frac{5}{8}$ ✓

QUESTION 91

A regular, unbiased number cube is rolled once.
What is the probability of rolling a 1, 2, or 3 on the number cube?

- 20%
- 3%
- 50% ✓
- 30%

QUESTION 92



QUESTION 92

A regular, unbiased spinner is spun once.

Given the spinner, what is the probability that it will land on red or blue?



$\frac{2}{5}$ ✓

$\frac{1}{2}$

$\frac{1}{5}$

$\frac{3}{5}$

QUESTION 93

A regular, unbiased spinner is spun once.

Given the spinner, what is the probability the spinner will land on red or green?



1.0

0.4

0.6 ✓

0.5

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An unbiased regular spinner is spun once.

Given the spinner, what is the probability that it will land on green or blue?



- 0.4 ✓
- 0.6
- 0.2
- 2

QUESTION 95

A regular, unbiased coin is tossed once.
How many possible outcomes are there?

- 1
- 2 ✓
- 0
- 3

QUESTION 96

A regular, unbiased number cube is rolled once.
How many possible outcomes are there?

- 0
- 3
- 1
- 6 ✓

QUESTION 96

A regular, unbiased number cube is rolled once.
How many possible outcomes are there ?

- 0
- 3
- 1
- 6

QUESTION 97

Use the given spinner.
Find the probability of the spinner landing on blue, if the spinner is spun once.



- $\frac{1}{2}$
- $\frac{5}{1}$
- $\frac{1}{4}$
- $\frac{1}{5}$

QUESTION 98

QUESTION 99



Use the given spinner.
Find the probability of the spinner landing on green, if the spinner is spun once.



$\frac{2}{5}$ ✓

$\frac{5}{2}$

$\frac{1}{5}$

$\frac{5}{1}$

QUESTION 100



Use the given spinner.
Find the probability of the spinner landing on green, when it is spun once.



$\frac{5}{3}$

$\frac{5}{2}$

$\frac{2}{5}$

$\frac{3}{5}$ ✓

QUESTION 100



QUESTION 100



Which numbers *could* represent a probability?

105%

-50%

120%

5% ✓

-20%

50% ✓

QUESTION 101



Which numbers *could* represent a probability?

0.2 ✓

1 ✓

-3

-1

1.1

2

QUESTION 102



An unbiased spinner, like the given spinner, is spun.



QUESTION 102

An unbiased spinner, like the given spinner, is spun.

What is the probability that the spinner will land on red?



$\frac{1}{5}$ ✓

$\frac{1}{2}$

$\frac{4}{5}$

$\frac{3}{5}$

QUESTION 103

There are 4 red marbles and 6 blue marbles in a bag.

If you select a marble at random, what is the probability you will select a red marble?

0.5

0.6

4

0.4 ✓

QUESTION 104

The table below shows the number of colored marbles in a bag.

Color	Number
-------	--------

QUESTION 104



The table below shows the number of colored marbles in a bag.
What is the probability of selecting an orange colored marble?

Color	Number
Blue	6
Green	3
Orange	5
Red	6

 $\frac{1}{20}$ $\frac{3}{4}$ $\frac{5}{6}$ $\frac{1}{4}$ ✓

QUESTION 105



A regular unbiased number cube is rolled.
Find the probability of rolling a 5.

 $\frac{1}{6}$ ✓ $\frac{6}{5}$ $\frac{5}{6}$ $\frac{1}{3}$

QUESTION 106



The table below shows the number of colored marbles in a bag. What is the probability of selecting a red colored marble ?

Color	Number
Blue	4
Green	5
Orange	3
Red	8

$\frac{8}{10}$

$\frac{1}{5}$

$\frac{1}{2}$

$\frac{2}{5}$ ✓

QUESTION 10/



The table shows the number of colored marbles in a bag. What is the probability of selecting a black marble ?

Color	Number
Black	5
Red	12
Blue	10
Purple	3

$\frac{1}{6}$ ✓

$\frac{1}{30}$

$\frac{5}{6}$

$\frac{5}{4}$



QUESTION 08

A bag contains 3 red, 2 blue and 4 yellow marbles.
What is the probability of selecting a blue marble from the bag?

$\frac{2}{3}$

$\frac{1}{3}$

$\frac{4}{9}$

$\frac{2}{9}$ ✓

QUESTION 09

A bag contains 3 red, 2 blue and 4 yellow marbles.
What is the probability of selecting a yellow marble from the bag?

$\frac{1}{9}$

$\frac{2}{9}$

$\frac{4}{9}$ ✓

$\frac{2}{3}$

QUESTION 10

A bag contains 3 red, 2 blue and 4 yellow marbles.

The probability of selecting a red marble from a bag is $\frac{1}{3}$ ✓. Express your answer in simplest form.

A regular, unbiased coin is tossed.
Describe the likelihood for the coin to land on heads?



- As likely to happen as not ✓
- Certain
- Likely
- Impossible

QUESTION 12

A regular, unbiased number cube is rolled.
What is the probability of rolling a 3?

- $\frac{1}{3}$
- $\frac{2}{3}$
- $\frac{1}{6}$ ✓
- $\frac{1}{2}$

QUESTION 13

A regular, unbiased coin is flipped.

The probability that the coin will land on a head is ✓

A team has 40% chance of winning each game in a tournament.
Describe a method to simulate the number of winnings in the next five games.

Randomly select a marble from a bag containing 2 red and 3 blue marbles.
Repeat 4 times with replacement.

Randomly select a marble from a bag containing 2 red and 3 blue marbles.
Repeat 5 times with replacement. ✓

Randomly select a marble from a bag containing 3 red and 3 blue marbles.
Repeat 5 times with replacement.

Randomly select a marble from a bag containing 3 red and 3 blue marbles.
Repeat 4 times with replacement.

QUESTION 16



A team has 80% chance of winning each game in a tournament.
Describe a method to simulate the number of winnings in the next 6 games.

Randomly select a marble from a bag containing 1 red and 4 blue marbles.
Repeat 5 times with replacement.

Randomly select a marble from a bag containing 1 red and 3 blue marbles.
Repeat 5 times with replacement.

Randomly select a marble from a bag containing 1 red and 4 blue marbles.
Repeat 6 times with replacement. ✓

Randomly select a marble from a bag containing 1 red and 3 blue marbles.
Repeat 6 times with replacement.

QUESTION 16



QUESTION 116

Humaid makes 75% of his free-throw attempts.

Describe a method he could use, to find the experimental probability of scoring in 5 consecutive free-throw attempts.

- Flip a coin 5 times
- Spin a spinner with 4 equal sections (3 blue and 1 red) 5 times
- Spin a spinner with 5 equal sections (4 blue and 1 red) 4 times
- Flip a coin 4 times

QUESTION 117

How can a $\frac{1}{6}$ chance be simulated?

- Use a number cube
- Use a coin
- Use a bag containing 1 blue marble, and 6 red marbles
- Use a bag containing 1 red marble, and 6 blue marbles

Mansoor makes 25% of his free-throw attempts.

Describe a method he could use to find the experimental probability of scoring in 7 consecutive free-throw attempts.



Flip a coin 4 times

Spin a spinner with 4 equal sections (1 blue and 3 red) 7 times

Flip a coin 7 times

Spin a spinner with 7 equal sections (1 blue and 6 red) 4 times

QUESTION 119

1

Nasser wins 20% of the video games he plays.

Describe a method he could use, to find the experimental probability of winning 6 consecutive games.



Roll a number cube 5 times

Spin a spinner with 6 equal sections (1 blue and 5 red) 5 times

Flip a coin 6 times

Spin a spinner with 5 equal sections (1 blue and 4 red) 6 times

QUESTION 120



Ali wins 30% of the video games he plays.

Describe a method he could use to find the experimental probability of winning 7 consecutive games.



- Spin a spinner with 10 equal sections (4 blue and 6 red) 6 times
- Spin a spinner with 10 equal sections (3 blue and 7 red) 5 times
- Spin a spinner with 10 equal sections (6 blue and 4 red) 30 times
- Spin a spinner with 10 equal sections (3 blue and 7 red) 7 times ✓

QUESTION 121



There is a 90% chance of getting a clear, sunny day in a city, during the month of August.

Describe a method to find the experimental probability, of getting clear, sunny days for all the days, in the first week of August.

- Spin a spinner with 10 equal sections (1 blue and 9 red) 7 times ✓
- Spin a spinner with 10 equal sections (2 blue and 8 red) 7 times
- Spin a spinner with 10 equal sections (1 blue and 9 red) 5 times
- Spin a spinner with 10 equal sections (2 blue and 8 red) 5 times

QUESTION 22



There is a 10% chance of getting a clear, sunny day in a city in January.

Describe a method to find the experimental probability of having, each day in the first week of January, sunny and clear.

- A spinner with 10 equal sections (1 blue and 9 red) 7 times ✓
- A spinner with 10 equal sections (3 blue and 7 red) 5 times
- A spinner with 10 equal sections (1 blue and 9 red) 5 times
- A spinner with 10 equal sections (3 blue and 7 red) 7 times

QUESTION 23



How can a 30% chance be simulated?

- Use a spinner with 10 equal sections (4 blue and 6 red)
- Use a spinner with 10 equal sections (2 blue and 8 red)
- Use a spinner with 10 equal sections (5 blue and 5 red)
- Use a spinner with 10 equal sections (3 blue and 7 red) ✓

QUESTION 24



How can a 70% chance be simulated?

- Spin a spinner with 10 equal sections (3 blue and 7 red) ✓
- Spin a spinner with 10 equal sections (4 blue and 6 red)
- Spin a spinner with 10 equal sections (5 blue and 5 red)
- Spin a spinner with 10 equal sections (2 blue and 8 red)

QUESTION 126

How can a 25% chance be simulated?

- Spin a spinner with 4 equal sections (1 red and 3 blue) ✓
- Spin a spinner with 8 equal sections (2 red and 6 blue) ✓
- Spin a spinner with 10 equal sections (5 red and 5 blue)
- Spin a spinner with 4 equal sections (2 red and 2 blue)
- Spin a spinner with 10 equal sections (2 red and 8 blue)
- Spin a spinner with 8 equal sections (4 red and 4 blue)

QUESTION 126

How would a 75% chance be simulated?

- Spin a spinner with 4 equal sections (2 red and 2 blue)
- Spin a spinner with 8 equal sections (2 red and 6 blue) ✓
- Spin a spinner with 4 equal sections (1 red and 3 blue) ✓
- Spin a spinner with 8 equal sections (4 red and 4 blue)
- Spin a spinner with 10 equal sections (5 red and 5 blue)
- Spin a spinner with 10 equal sections (2 red and 8 blue)

QUESTION 127

Mayed guesses 40% of the multiple-choice questions right in his exams.
How can this situation be modeled?

- Roll a number cube
- Spin a spinner with 5 equal sections (2 red and 3 blue)
- Roll 2 number cubes
- Spin a spinner with 4 equal sections (2 red and 2 blue)

QUESTION 128

How can a $\frac{5}{6}$ chance be simulated?

- Use a coin
- Use a number cube
- Use a bag containing 5 red marbles and 5 blue marbles
- Use a bag containing 5 blue marbles and 6 red marbles

QUESTION 129

A teacher can use a number cube to simulate a $\frac{4}{6}$ chance to his students.



QUESTION 129

A teacher can use a number cube to simulate a $\frac{4}{6}$ chance to his students.

use a bag containing 4 blue marbles and 6 red marbles

use a coin

use a bag containing 4 red marbles and 5 blue marbles

QUESTION 130

Tahir and Mustafa are sitting together in a row.
Find all the possible ways they can sit together in a row.
What is the probability that Mustafa and Tahir will sit in this particular order?

$\frac{1}{3}$

$\frac{1}{2}$



$\frac{1}{6}$

$\frac{1}{4}$

QUESTION 131

Fatma, Halima, and Rasha are sitting together in a row.

Find all the possible ways they can sit together in a row.

What is the probability that Halima, Fatma, and Rasha will sit in this particular order?

QUESTION 131

Fatma, Halima, and Rasha are sitting together in a row.

Find all the possible ways they can sit together in a row.

What is the probability that Halima, Fatma, and Rasha will sit in this particular order?

$\frac{5}{6}$

$\frac{7}{10}$

$\frac{1}{10}$

$\frac{1}{6}$ ✓

QUESTION 132

Eman chooses 1 manakeesh and 1 drink from the following choices;

Manakeesh - Cheese, Zaatar
Drink - Water, Juice, Milkshake, Cola

Find all the possible outcomes in this sample space.

What is the probability that Eman chooses a Zaatar Manakeesh and a Milkshake?

$\frac{1}{6}$

$\frac{1}{7}$

$\frac{1}{5}$

$\frac{1}{8}$ ✓

QUESTION 133



Najla chooses 1 manakeesh, and 1 drink from the following choices;

Manakeesh - Zaatar
Drink - Water, Juice, Cola

Find all the possible outcomes in this sample space. What is the probability of Najla choosing Zaatar with Water?

$\frac{1}{3}$ ✓

$\frac{1}{4}$

$\frac{1}{2}$

$\frac{1}{5}$

QUESTION 134



A spinner with 3 equal sections is spun and a coin is flipped. The three sections of the spinner are numbered 1,2 and 3.

Find all the possible outcomes in this sample space. What is the probability of flipping Heads and getting a 2?

$\frac{1}{6}$ ✓

$\frac{1}{4}$

$\frac{1}{3}$

$\frac{1}{5}$

QUESTION 135



QUESTION 136

Mahmood and Sulman are sitting together in a row.

Find all the possible ways they can sit together.

What is the probability that Sulman and Mahmood will sit in this particular order?

 $\frac{1}{3}$ $\frac{1}{6}$ $\frac{1}{4}$ $\frac{1}{2}$ 

QUESTION 136

Amna, Bushra, and Sara are sitting together in a row.

Find all the possible ways they can sit together.

What is the probability that Sara, Bushra, and Amna will sit in this particular order?

 $\frac{1}{7}$ $\frac{5}{6}$ $\frac{2}{7}$ $\frac{1}{6}$ 

QUESTION 137

.....

QUESTION 137

Mansoor chooses 1 pizza, and 1 drink from the following choices;

Pizza - Pepperoni, Chicken, Spicy, Mushroom
Drink - Milkshake, Juice, Cola

Find all the possible outcomes in this sample space. What is the probability that Mansoor chooses a Mushroom Pizza with Juice?

 $\frac{5}{12}$ $\frac{11}{12}$ $\frac{7}{12}$ $\frac{1}{12}$ ✓

QUESTION 138

Ali chooses 1 manakeesh and 1 drink from the following choices;

Manakeesh - Cheese, Zaatar, Nutella
Drink - Water, Juice, Milkshake

Find all the possible outcomes in this sample space. What is the probability of choosing Nutella Manakeesh and a Milkshake?

 $\frac{7}{9}$ $\frac{1}{9}$ ✓ $\frac{8}{9}$ $\frac{2}{9}$

QUESTION 139



Maha chooses 1 manakeesh, and 1 drink from the following choices;

Manakeesh - Zaatar, Cheese
Drink - Water, Juice, Cola

Find all the possible outcomes in this sample space. What is the probability of Maha choosing Zaatar manakeesh and Juice?

$\frac{1}{6}$ ✓

$\frac{1}{4}$

$\frac{1}{2}$

$\frac{5}{6}$

QUESTION 140



A spinner with 3 equal sections is spun and a coin is flipped. The three sections of the spinner are colored Red, Blue, and Green.

Find all the possible outcomes in this sample space. What is the probability of flipping Heads and getting Blue on the spinner?

$\frac{1}{6}$ ✓

$\frac{1}{10}$

$\frac{3}{10}$

$\frac{5}{6}$

QUESTION 11

A coin is flipped, and a 6 sided dice is rolled.
Find all the possible outcomes in this sample space. What is the probability of flipping Tails and rolling a 4?

- $\frac{2}{6}$
- $\frac{1}{12}$ ✓
- $\frac{1}{6}$
- $\frac{11}{12}$

QUESTION 12

Eman chooses 1 pizza and 1 drink from the following choices;

Pizza - Cheese or Spicy
Drink - Milkshake or Cola

Find all the possible outcomes in this sample space. What is the probability of choosing a Cheese pizza with a Cola?

- $\frac{3}{4}$
- $\frac{1}{4}$ ✓
- $\frac{2}{6}$
- $\frac{1}{6}$

QUESTION 13

Fatma, Halima, and Rasha are sitting together in a row.

QUESTION 143

Fatma, Halima, and Rasha are sitting together in a row.
Use a list, to find the sample space for the different ways they can sit in a row.

What is the total number of outcomes in the sample space?

- 6
- 10
- 4
- 8

QUESTION 144

A coin is flipped, and a 6 sided dice is rolled.
Use a list, to write down all the possible outcomes in this sample space.

What is the total number of outcomes in the sample space?

- 14
- 12
- 18
- 16

QUESTION 146

A 3 sided spinner is spun and a coin is flipped. The spinner has colors Red, Blue, and Green.

Use a list, to write down all the possible outcomes in this sample space.

What is the total number of outcomes in the sample space?

- 6
- 8
- 2
- 4

QUESTION 146



Maha chooses 1 manakeesh and 1 drink from the following choices;

Manakeesh - Zaatar, Cheese,
Drink - Water, Juice, Cola

Use a list, to write down all the possible outcomes in this sample space.

What is the total number of outcomes in the sample space?

- 10
- 8
- 6
- 4

QUESTION 147



QUESTION 147

Ali chooses 1 manakeesh and 1 drink from the following choices;

Manakeesh - Cheese, Zaatar, Nutella
Drink - Water, Juice, Milkshake

Use a list, to write down all the possible outcomes in this sample space.

What is the total number of outcomes in the sample space?

12

8

9

11

QUESTION 148

Najja chooses 1 manakeesh and 1 drink from the following choices;

Manakeesh - Zaatar
Drink - Water, Juice, Cola

Use a list, to write down all the possible outcomes in this sample space.



Najla chooses 1 manakeesh and 1 drink from the following choices;

Manakeesh - Zaatar
Drink - Water, Juice, Cola

Use a list, to write down all the possible outcomes in this sample space.

What is the total number of outcomes in the sample space?

- 2 4 3 1

QUESTION 140



Aisha chooses 1 manakeesh and 1 drink from the following choices;

Manakeesh - Cheese, Zaatar
Drink - Water, Juice, Milkshake, Cola

Use a list, to write down all the possible outcomes in this sample space.

What is the total number of outcomes in the sample space?

- 8 6 9 7

QUESTION 160

Halima chooses 1 pizza and 1 drink from the following choices;

Pizza - Cheese or Spicy
Drink - Milkshake, Juice or Cola

Use a list, to write down all the possible outcomes in this sample space.
What is the total number of outcomes in the sample space?

- 4 7 5 6 ✓

QUESTION 161

Mansoor chooses 1 pizza, and 1 drink from the following choices;

Pizza - Pepperoni, Chicken, Spicy, Mushroom
Drink - Milkshake, Juice, Cola

Use a list, to write down all the possible outcomes in this sample space.
What is the total number of outcomes in the sample space?

- 13 11 10 12 ✓

Saeed chooses 1 manakeesh and 1 drink from the following choices;

Manakeesh - Cheese
Drink - Water, Juice

Use a list, to write down all the possible outcomes in this sample space.

What is the total number of outcomes in the sample space?

- 4
- 1
- 2
- 3

QUESTION 153

Mahmood and Sulman are sitting together in a row.

Use a list, to find the sample space for the different ways they can sit in a row.

What is the total number of outcomes in the sample space?

- 3
- 1
- 4
- 2

QUESTION 154

QUESTION 14

Amna, Bushra, and Sara are sitting together in a row.
Use a list, to find the sample space for the different ways they can sit in a row.

What is the total number of outcomes in the sample space?

- 5 4 3 6 ✓

QUESTION 15

Which of the following represents dependent events?

- A boy chooses a tennis ball from a bag, replaces it, then chooses another ball.
- A girl chooses a bead from a drawer, then chooses another bead from the same drawer without replacing the first bead. ✓
- A girl chooses a bead from a drawer, replaces it, then chooses another bead from the same drawer.
- A boy chooses a tennis ball from a bag, keeps it, then chooses another ball from another bag.

QUESTION 16

QUESTION 166

Which of the following represents dependent events?

- A student randomly selects a pencil from a pencil case, keeps it, then selects a pen from another pencil case.
- A student randomly selects a pencil from a pencil case, keeps it, then selects a pen.
- A student randomly selects a pencil from a pencil case, replaces it, then selects a pen.
- A student randomly selects a pen from a pencil case, replaces it, then selects another pen.

QUESTION 167

Which of the following represents dependent events?

- Spin two spinners.
- Select two students from a group of students one after the other.
- Select a student from a group of students, then select another student from another group of students.
- Roll two number cubes.

QUESTION 168

Which of the following represents dependent events?

- Flip two coins.
- Roll a number cube and flip a coin.

QUESTION 158



Which of the following represents dependent events?

- Flip two coins.
- Roll a number cube and flip a coin.
- Randomly select a marble from a bag, then select another marble without replacement. ✓
- Randomly select a marble from a bag, replace it, then select another marble.

QUESTION 159



Find the probability of randomly selecting two red apples one after the other from a bag containing the apples shown below without replacement?

$\frac{2}{15}$ ✓



QUESTION 160

Find the probability of randomly selecting a red then a green apple from a bag containing the apples shown below, without replacement?

$\frac{8}{45}$ ✓





QUESTION 161

Find the probability of randomly selecting a yellow then a green apple from a bag containing given the apples, without replacement?

$\frac{1}{45}$ ✓



QUESTION 162

A bag contains letter tiles as shown in the table.
What is the probability of selecting letter B tile then letter D tile at random without replacement?

$\frac{21}{190}$ ✓

Letter	Count
A	4
B	6
C	3
D	7

QUESTION 163

A bag contains letter tiles as shown in the table.
What is the probability of selecting letter A tile then letter C tile at random without replacement?

$\frac{3}{95}$ ✓

QUESTION 164

Letter	Count
A	4
B	6
C	3
D	7

A bag contains letter tiles as shown in the table.
What is the probability of selecting two letter A tiles one after the other at random without replacement?

$\frac{3}{98}$ ✓

QUESTION 165

Letter	Count
A	4
B	6
C	3
D	7

A bag contains letter tiles as shown in the table.
What is the probability of selecting two letter B tiles one after the other at random without replacement?

$\frac{3}{38}$ ✓

QUESTION 166

Letter	Count
A	4
B	6
C	3
D	7

	u	u
C		3
D		7

QUESTION 165

A bag contains letter tiles as shown in the table.

What is the probability of selecting two letter B tiles one after the other at random without replacement?

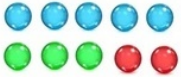
✓

Letter	Count
A	4
B	6
C	3
D	7

QUESTION 166

A bag contains 5 blue marbles, 3 green marbles, and 2 red marbles.

What is the probability of pulling 2 red marbles one after the other at random without replacement?



$\frac{1}{5}$

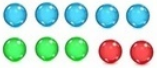
$\frac{1}{45}$ ✓

$\frac{1}{9}$

$\frac{1}{25}$

A bag contains 5 blue marbles, 3 green marbles, and 2 red marbles.

What is the probability of pulling a blue marble, then pulling a red marble without replacement?



$\frac{1}{9}$

$\frac{1}{9}$

$\frac{1}{10}$

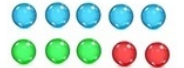
$\frac{1}{10}$

QUESTION 188



A bag contains 5 blue marbles, 3 green marbles, and 2 red marbles.

What is the probability of pulling a red marble, then pulling a green marble without replacement?



$\frac{1}{4}$

$\frac{1}{15}$

$\frac{3}{50}$

$\frac{1}{8}$

$\frac{3}{50}$

$\frac{1}{8}$

QUESTION 169



There are permutations when making a 3 digit number using 1, 4, 5, 7 and 8 without repetitions.

QUESTION 170



There are permutations when making a 2 digit number using 1, 4, 5, 6 and 8 without repetitions.

QUESTION 171



The number of permutations for $P(3, 3)$ is .