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Saeed wants to ask 50 friends.

Instead, he decides to ask every 5th friend that arrives into school.
From a sample of 10 friends, 6 of his friends like boxing.

This method represents sampling.

Using the survey results, we can predict that of Saeed's friends will like boxing.



QUESTION 2

A pet shop owner stands outside its store, and randomly stops people that pass.

He asks people if they want to complete a survey.

If yes, questions are asked about how many pets they own.
In a day, a total of 600 people were counted to walk past the store.
75 people were surveyed.

5 people owned more than 5 pets.
20 people owned 1 pet.

This method is . Using the sample results, we can predict that the number of people that own more than 5 pets is people.

A teacher randomly selects 50 students out of 1,000 students in grade 7, to participate in a survey about recycling.

She assigns each student a number, and uses a random number generator to select the students.

Of the 50 students, 25 students recycle their plastic bottles.

This is an example of sampling.

Using these survey results, we can predict that students in grade 7 will recycle their plastic bottles.



QUESTION 4



A teacher selects 30 students out of 300 students in grade 6, to participate in a survey about recycling.

She asks the first 30 students that enter her classroom.

Of the 30 students, 25 students refill their water bottles.

This is an example of biased convenience sampling.

Using these survey results, we could predict that students from grade 6 will refill their water bottles.



QUESTION 6



The first 50 customers that arrived at a park in the morning, were surveyed.

In this particular day, 600 customers came to visit the park.



If 45 of the 50 customers state that a water park is needed, we can predict that ✓ customers will also state a water park is needed.

This is not a valid conclusion because the sample is ✓.

QUESTION 6



A random sample of 30 students from a school with a population of 200.
These 30 students were asked their favorite type of vacation.

18 of the 30 students said the beach.

Therefore, ✓ students would be expected to choose the beach as their favorite type of vacation.



A random sample of 30 students from a school with a population of 500. These 30 students were asked their favorite type of vacation.

If 12 of the 30 students said the beach, how many students would be expected to choose the beach as their favorite type of vacation?



- 250
- 200
- 150
- 100

QUESTION 8

The last 20 people that were leaving a mall on a single day were asked their favorite hobbies.

In total, 1,000 people entered the mall. 17 people said they like shopping.

From the sample, we could predict that people from 1,000 people would also like shopping.

-
-
-

QUESTION 9



The last 40 people that were leaving a mall on a single day were asked their favorite hobbies.

In total, 2,000 people entered the mall.
30 people said they like shopping.

1. From the sample, we can predict that people like shopping.
2. This survey will generate samples.



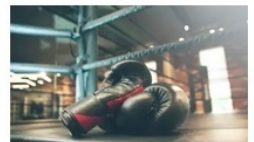
QUESTION 10



Aziz is surveying his friends to find what sports they like.

Aziz writes down all his friends on a list. He has 60 in total.

He decides to ask every 3rd friend as they arrive into school.



QUESTION 10

1

Aziz is surveying his friends to find what sports they like.

Aziz writes down all his friends on a list. He has 60 in total.

He decides to ask every 3rd friend as they arrive into school.

From a sample of 15 friends, 3 of his friends like boxing.

This method is unbiased systematic sampling.

Using the survey results, we can predict that of Aziz's friends will like boxing.



QUESTION 11



A TV store is expanding.
They want to know what their customers like about the store.
The last 40 customers were surveyed as they left the store in the evening.
In total, the store had 500 customers that day.



Of the 40 surveyed, 20 customers liked the low price of TVs.

- a) Using the results of this survey, predict the number of customers that like the low price of TVs.
- b) Suggest a better and more valid method that could be used.

250 ✓

Survey 40 customers as they arrive into the store.

300

Survey every 10th person that enters the TV store, between 9 am and 10 am.

200

Survey every 10th person that enters the TV store, over a week. ✓

QUESTION 12



A pet shop owner stands outside its store.
He stops every 5th person that walks past the store in a day, and surveys them.

Questions are asked about how many pets they own.

A pet shop owner stands outside its store.
He stops every 5th person that walks past the store in a day, and surveys them.

Questions are asked about how many pets they own.

A total of 600 people were counted to walk past in the day.
75 people were surveyed.
5 people owned more than 5 pets.
20 people owned 1 pet.

This method is . Using the survey results, we can predict that the number of people that own 1 pet is people.

QUESTION 3



A teacher randomly selects 50 students out of 350 students in grade 6, to participate in a survey about recycling.
She assigns each student a number, and uses a random number generator to select the students.
Of the 50 students, 10 students recycle their plastic bottles.

This is an example of .

Using these survey results, we can predict that students in grade 6 recycle their plastic bottles.



Ahmed invites all his 30 friends to come, and play at his house.
A simple random sample was conducted.

Ahmed surveys 5 friends, asking their favorite game.

3 of the 5 friends say football games.

Therefore, Ahmed can predict that friends will choose football games as their favorite game.



QUESTION 15

Ahmed is inviting all his 20 friends to come and play at his house.
A simple random sample was conducted.

Ahmed surveys 5 friends, asking their favorite game.

If 4 of the 5 friends said computer games, how many friends can we predict will choose computer games as their favorite game?



16 ✓

14

20

18

QUESTION 16

1

A systematic random sample of 50 customers was taken, at desserts shop.

In a single day, the shop had 650 customers.
These 50 customers were asked their favorite dessert.

If 12 of the 50 customers said waffles, how many customers should we expect to name waffles as their favorite dessert ?

We can predict that customers will name waffles as their favorite dessert.



125

108

92

QUESTION 17

1

A systematic random sample of 50 customers was taken, at desserts shop.

In a single day, the shop had 650 customers.
These 50 customers were asked their favorite dessert.

If 25 of the 50 customers said ice-cream, how many customers should we expect to name ice-cream as their favorite dessert?



QUESTION 17

A systematic random sample of 50 customers was taken, at desserts shop.

In a single day, the shop had 650 customers.
These 50 customers were asked their favorite dessert.

If 25 of the 50 customers said ice-cream, how many customers should we expect to name ice-cream as their favorite dessert?



- 350
- 300
- 375
- 325 ✓

QUESTION 18

The local gym is deciding if customers want more gym classes.
The gym surveys 10 gym customers in a day.

The gym could improve their sampling method by ✓



QUESTION 19

The local gym is deciding if customers want more gym classes.
The gym surveys 50 gym customers in a day.

How could the gym improve their sampling method?



Ask 60 gym customers.

Go to the mall and ask 50 people.

Ask the first 5 people that arrive for the morning class.

Ask every 5th person that arrives to the gym over a week. ✓

QUESTION 20

Mr Ali is expanding his pizza business.
He wants to know what customers think about his pizzas.

He surveyed 100 customers in his shop, on a Sunday.



Mr Ali could improve his sampling method by asking every 10th person that arrives to his pizza shop, each day over a week. ✓

Mr Ali is expanding his pizza business.
He wants to know what customers think about his pizzas.
He surveyed 100 customers in his shop in a day.

How could Mr Ali improve his sampling method ?



Ask every 10th person that arrives to his pizza shop over a week. ✓

Ask 100 people at a desserts shop.

Ask the last 10 people that leave the pizza shop on a day.

Ask 50 customers that arrive to his shop in a day.

QUESTION 22

Decide the type of sampling method the following situation describes;

A teacher wants to know how many hours it takes for all students at the school to complete their homework. She asks the first 5 students that enter her classroom.

This is an example of sampling.

simple random

systematic random

voluntary response

QUESTION 23

Decide the type of sampling method the following situation describes;

A teacher wants to know how many hours it takes for all students at the school to complete their homework. She asks the last 2 students that leave her classroom.

Voluntary response sampling

Systematic random sampling

Convenience sampling ✓

Simple random sampling

QUESTION 24

Decide the type of sampling method the following situation describes;

Every 15th student as they enter the school, is surveyed to determine their favorite sports.

This is an example of .

QUESTION 25

Decide the type of sampling method the following situation describes;

Every 3rd student as they enter the school, is surveyed to determine students' favorite colors.

Simple random sampling

Convenience sampling

Systematic random sampling ✓

Voluntary response sampling

QUESTION 26

A class teacher randomly selects 6 students from his class of 30 to find out what their favorite subjects are. He assigns each student a number, and uses a random number generator to select the students.

2 students enjoy Art.
3 students enjoy Physics.
1 student enjoys English

- a) Predict the number of students that enjoy Art.
b) Give a suggestion for improving this sampling method.



Email the survey to the 30 students. Wait for the response.

Increase the number of students selected. ✓

10 ✓

15

5

Survey 6 people at the cinema.

QUESTION 27

A class teacher randomly selects 6 students from his class of 30 to participate in a survey. He assigns each student a number, and uses a random number generator to select the students.

- 2 students enjoy Art.
- 3 students enjoy Physics.
- 1 student enjoys English

- a) Is this a biased or unbiased sample?
- b) Predict the number of students that enjoys English.



<input type="checkbox"/> 10	<input type="checkbox"/> 20	<input type="checkbox"/> 15
<input checked="" type="checkbox"/> 5 ✓	<input checked="" type="checkbox"/> unbiased ✓	<input type="checkbox"/> biased

QUESTION 28

A TV store is expanding. They want to know what their customers like about the store. 100 survey emails were sent, and 15 surveys were completed.

Of the 15 surveyed, 9 customers liked the variety of TV's in the store.



- a) Using the results of this survey, predict the number of customers that like the variety of TV's in the store.
- b) Suggest a better more valid method that could be used



QUESTION 28



A TV store is expanding.
They want to know what their customers like about the store.
100 survey emails were sent, and 15 surveys were completed.



Of the 15 surveyed, 9 customers liked the variety of TV's in the store.

- a) Using the results of this survey, predict the number of customers that like the variety of TV's in the store.
- b) Suggest a better, more valid method that could be used.

Ask every 5th customer that arrives to a pizza store over a week.

65

55

60 ✓

Send 500 emails

Ask every 5th customer that arrives to the store over a week. ✓

QUESTION 29



A clothing store surveys its customers, to find why they shop at the store.



An email was sent to all its customers.

Of the 100 customers that were sent an email, only 15 responded to the survey.



QUESTION 29



A clothing store surveys its customers, to find why they shop at the store.

An email was sent to all its customers.

Of the 100 customers that were sent an email, only 15 responded to the survey.

12 customers from the 15 that completed the survey, said they liked the low prices.

From this sample, we can predict that  customers will also shop at the store because of the low prices.



QUESTION 30



QUESTION 30



Every 3rd student is asked which sports club they will join as they enter the gym.

There is a total of 36 students in this class.

From a sample of 8 students, 6 will join the basketball club.

Using the results of this survey, we can predict that the students will join the basketball club.



QUESTION 31



A car company surveys its customers, asking about their favorite car colors.

The company emails its 2,000 customers, and 200 respond to the survey.



QUESTION 31



A car company surveys its customers, asking about their favorite car colors.

The company emails its 2,000 customers, and 200 respond to the survey.

From the 200 that answered, 10 customers like the color yellow.



Using the results of this sample, we can predict that only ✓ customers are likely to choose the color yellow.

The conclusion is not valid because the sample is ✓.

QUESTION 32



An online website wants to know why its customers use their website.

An email is sent to its 5,000 customers.
1,000 customers respond to the email.



QUESTION 32

An online website wants to know why its customers use their website.

An email is sent to its 5,000 customers.

1,000 customers respond to the email.

250 customers choose free delivery as the main reason for using the website.

Using the results from the survey, we can expect customers to use the website because they offer free delivery.

This survey will generate samples.



QUESTION 33

A survey was conducted at a school asking students their favorite color.

The first 20 boys that entered school were asked, from a population of 200 boys and 200 girls.

2 boys chose the color blue.

1. From the 400 students, we can predict that students like the color blue.

2. This survey will generate samples.

QUESTION 34



Aziz loves football.

He surveys his friends to find out what sports his friends like.

Aziz sends 60 friends an email. 20 friends respond to his survey.

He finds that 16 of his friends like football.



This is voluntary response sampling. From the survey, Aziz can predict that of friends like football too.

QUESTION 36



Mariam wants to know what flavor of cupcakes her customers like.

She asks every 10th customer that arrives over a week.

In total she gets 1,200 customers in the week.



QUESTION 35



Mariam wants to know what flavor of cupcakes her customers like.

She asks every 10th customer that arrives over a week.
In total she gets 1,200 customers in the week.

From a sample of 30 customers, 20 like her chocolate cupcakes.



- a) Using the sample, predict the number of customers that will like her chocolate cupcakes.
- b) Select the type of sampling this survey describes.

<input type="checkbox"/> Convenience sampling	<input checked="" type="checkbox"/> 800 ✓
<input type="checkbox"/> 750	<input checked="" type="checkbox"/> Systematic random sampling ✓
<input type="checkbox"/> 850	<input type="checkbox"/> Voluntary response sampling

QUESTION 36



A book store surveys its customers, to find why they shop at the store.

An email was sent to all its customers.



QUESTION 36



A book store surveys its customers, to find why they shop at the store.

An email was sent to all its customers.

Of the 150 customers that were sent an email, only 15 responded.

1 customer from the 15 that completed the survey, said they like the selection of books at the store.



From this sample, we can predict that customers shop at the book store because they like the selection of books.

QUESTION 37



Maha surveys her class about their favorite food.

A simple random sample of 10 girls, from a class of 35 girls was used in this survey.

If 4 of the 10 girls said burrosers. how many students from the class of 35 can we expect to name burrosers as their favorite food?



Maha surveys her class about their favorite food.

A simple random sample of 10 girls, from a class of 35 girls was used in this survey.

If 4 of the 10 girls said burgers, how many students from the class of 35 can we expect to name burgers as their favorite food?



16

18

14 ✓

12

QUESTION 30



A fitness center has 100 people attend the cycling class.

20 people from the class were asked their favorite sport.
15 people said cycling.

Using the results from the survey, we can predict that people choose cycling as their favorite sport.

This survey will generate samples.



A survey was conducted at a pizza shop.
Every 5th customer was surveyed, to find out customers' favorite pizza.
50 customers were surveyed.
From the survey, 25 customers prefer the spicy pizza.
In total, 250 customers entered the shop on a single day.



1. From the 250 customers, we can predict that customers like the spicy pizza.
2. This survey will generate samples.

QUESTION 40

1

Which sampling method would give the most unbiased results, if you wanted to survey favorite vacation destinations by students at your school.

- Ask 10 friends at your school.
- Go to the nearest airport. Ask 100 people that arrive back from vacation.
- Ask 100 random students from your school, of different ages.
- Ask 100 people that you come across at your local supermarket.

QUESTION 41

1

Describe the sampling method used in this survey;

A store wants to survey customers' favorite sneakers. The store asks every customer that buys something and the first 10 customers in the morning.



Simple random sampling

Convenience sampling ✓

Voluntary response sampling

Systematic random sampling

QUESTION 42



Describe the sampling method used in this survey;

A parking lot wants to find how long people leave their cars in the parking lot. Every 10th car is stopped at the parking entrance, and asked to take part in the survey.



Voluntary response sampling

Systematic random sampling ✓

Convenience sampling

Simple random sampling

QUESTION 43



Describe the sampling method used in this survey;

A supermarket wants to know what customers think about their new coffee.
Customers are asked if they want to answer some questions first.
If yes, then they are given a survey to complete, and a sample of the new coffee to drink.



Convenience sampling

Systematic random sampling

Voluntary response sampling ✓

Simple random sampling

QUESTION 44



Decide the type of sampling method the following situation describes;

Abdulla owns a juice and smoothie shop.
One morning, as he opens his shop, he decides to survey 3 customers that arrive to his shop.
He uses the results of this sample, to change the juice and smoothie menu.



Decide the type of sampling method the following situation describes;

Abdulla owns a juice and smoothie shop.
One morning, as he opens his shop, he decides to survey 3 customers that arrive to his shop.
He uses the results of this sample, to change the juice and smoothie menu.



Systematic random sampling

Voluntary response sampling

Simple random sampling

Convenience sampling ✓

QUESTION 46

Which sampling method would give the most unbiased results, if you wanted to find the number of people in your school that spent more than 4 hours completing their homework.

Ask 30 students in your Math and Science class.

Ask 30 people that you meet at the mall

Ask 30 random students from your school, of different ages. ✓

Ask 30 friends

QUESTION 46

QUESTION 46

Decide the type of sampling method the following situation describes;

A supermarket is running a competition for its customers. The prize is a sports car. As a customer enters the supermarket, they are assigned a number. At the end of the week, the supermarket will use a random number generator to pick its winners.

Voluntary response sampling

Simple random sampling ✓

Systematic random sampling

Convenience sampling

QUESTION 47

Decide the type of sampling method the following situation describes;

A teacher surveys students from all her classes. She wants to know what is everyone's favorite subject. First, she asks all the students if they want to participate in her survey. If they agreed, she surveys them, asking what is their favorite subject.

Convenience sampling

Simple random sampling

Systematic random sampling

Voluntary response sampling ✓

QUESTION 48



Decide the type of sampling method the following situation describes;

The sports coach wants to survey students in his after school club. In total, he teaches 40 students after school. He places each students' name in a hat, and randomly selects 10 names from the hat.

- Systematic random sampling
- Convenience sampling
- Voluntary response sampling
- Simple random sampling ✓

QUESTION 49



Decide the type of sampling method the following situation describes;

Mariam surveys students from her school about their favorite ice-cream flavor. First, she asks the students if they want to participate in her survey. If they agreed, she surveys them, asking what their favorite flavor is.

- Simple random sampling
- Systematic random sampling
- Voluntary response sampling ✓
- Convenience sampling

QUESTION 50



Decide the type of sampling method the following situation describes;

Mariam surveys students from her school about their favorite ice-cream flavor. First, she asks the students if they want to participate in her survey. If they agreed, she surveys them, asking what their favorite flavor is.

Simple random sampling

Systematic random sampling

Voluntary response sampling ✓

Convenience sampling

QUESTION 50



Decide the type of sampling method the following situation describes;

Asking every 10th customer that enters the mall, is surveyed to determine how long they spend shopping at a mall.



Simple random sampling

Systematic random sampling ✓

Voluntary response sampling

Convenience sampling