

Maths

Sampling methods

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Sampling methods

1. In each of these situations, explain if it would be appropriate to use a sample?

Ron wants to find out if people in his tutor group prefer cheese and onion or ready salted crisps.

Dexter wants to know how many cups of tea people in the UK drink daily.

Whitney wants to find out how much money families spend on a day out.

Eva wants to know if guests at her birthday party want to go ice skating or bowling.

2. Match the sampling types with their descriptions.

Stratified

The population is listed then from a random point, every n th item is picked.

Quota

Every item in the population has the same chance of being picked.

Systematic

A sample is chosen based on set criteria including the amount of items.

Simple Random

The population is divided into subgroups and a representative sample is taken from each of these.



Sampling methods

3. A bus company conducts a survey about a young person travel card. They decide to use random sampling to choose their sample. Explain why this is not the best choice and suggest an alternative.

4. A chocolate factory wants to check the quality of their boxed chocolates. What sampling method should they use, and why?

5. A biscuit factory wants to conduct a wellbeing survey with its workforce, most of whom work on the assembly line. There are small numbers of workers in admin and warehousing.

What is the best choice of sampling method, and why?



Answers



Sampling methods

1. In each of these situations, explain if it would be appropriate to use a sample?

Ron wants to find out if people in his tutor group prefer cheese and onion or ready salted crisps.

No, population size is small enough.

Dexter wants to know how many cups of tea people in the UK drink daily.

Yes, huge population of tea drinkers

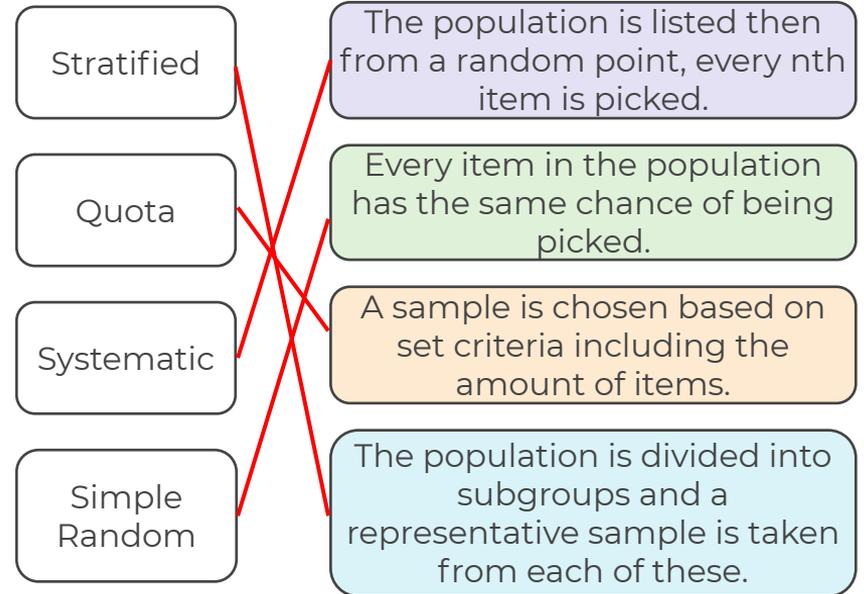
Whitney wants to find out how much money families spend on a day out.

Yes, very large population.

Eva wants to know if guests at her birthday party want to go ice skating or bowling.

No, population size is small enough.

2. Match the sampling types with their descriptions.



Sampling methods

3. A bus company conducts a survey about a young person travel card.

They decide to use random sampling to choose their sample.

Explain why this is not the best choice and suggest an alternative.

Only need data from young people, quota sampling would be more appropriate.

4. A chocolate factory wants to check the quality of their boxed chocolates.

What sampling method should they use, and why?

Systematic sampling is the most appropriate.

5. A biscuit factory wants to conduct a wellbeing survey with its workforce, most of whom work on the assembly line. There are small numbers of workers in admin and warehousing.

What is the best choice of sampling method, and why?

Stratified sampling where workers are divided into groups and a representative random sample of each is taken.

