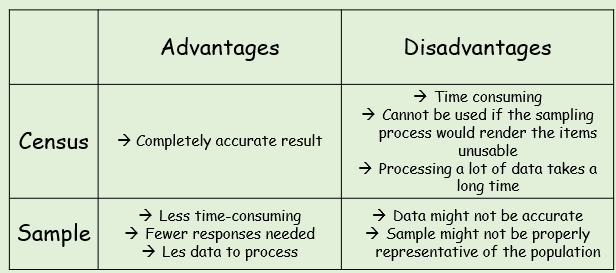
**1A Populations & Samples**

Population

Census

Sample

Sampling Frame



1. A supermarket wants to test a delivery of avocados for ripeness by cutting them in half.
2. Suggest a reason why the supermarket should choose a sample rather than a census

The supermarket tests a sample of 5 avocados and find that 4 of them are ripe. They estimate that 80% of the total are ripe.

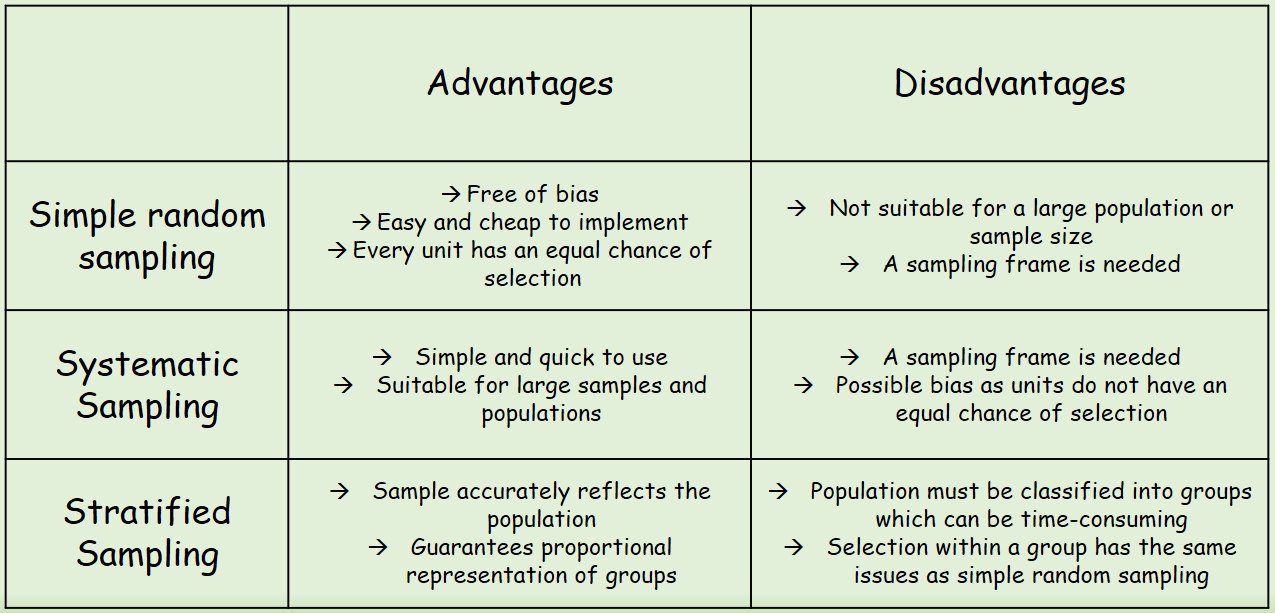
1. Suggest a way this estimate could be improved

**1B Random Sampling (Simple Random, Systematic & Statified)**

Simple Random

Systematic

Stratified



1. A yacht club with 100 members are listed alphabetically in the club’s membership book. The committee wants to take a sample of 12 members to fill in a questionnaire.
2. Explain how they could use a random number generator to generate the sample
3. Explain how they could use a lottery system to generate the sample
4. A factory manager wants to find out what his workers think of the canteen facilities. He decides to give a questionnaire to a sample of 80 workers. It is believed that different age groups will have different opinions.

The table to the right shows the number of workers in each age bracket.

1. What sampling method should be used?

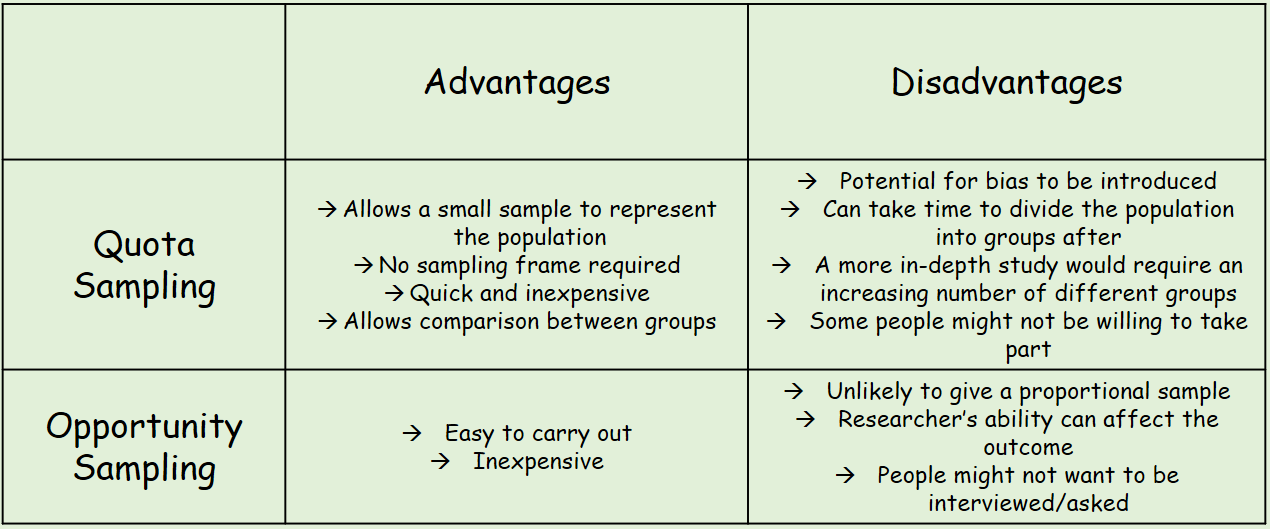
|  |  |
| --- | --- |
| Age | Quantity |
| 18-32 | 75 |
| 33-47 | 140 |
| 48-62 | 85 |

1. How many workers should be selected from each age bracket?

**1C Non-Random Sampling (Quota & Opportunity)**

Quota Sampling

Opportunity Sampling



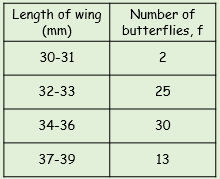
**1D Types of Data**

Quantitative Data

Qualitative Data

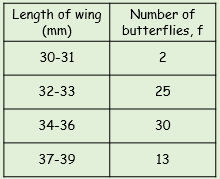
Discrete Data

Continuous Data

Class Boundaries

Midpoint

Class Width

1. Is the length Qualitative or Quantitative?
2. Is the length Discrete or Continuous?
3. Write down the class boundaries, midpoint and class width for the class 34-36