

\*See investigation pg. 256

8.1 Univariate analysis

Univariate analysis involves a single variable, for examples, the weight of all the students in your class.

Comparing two things, like height and weight, is bivariate analysis. (Which we will look at later)

Data – is the information you gather

- Data can be split into two categories

<u>Qualitative</u>	<u>Quantitative</u>
- Seen as categories - called categorical data examples How do you travel to school? what is favorite pen color? etc.	- information that can be counted or measured How long does it take you to get to school? How many pens do you own?

Is the data from test scores qualitative or quantitative?

Quantitative data can be split up into two categories: discrete and continuous.

- A quantitative discrete variable has exact numerical values.
  - o Here we are working with values of 0, 1, 2, 3,
  - o Like the number of songs you have downloaded
- A quantitative continuous variable can be measured and its accuracy depends on the accuracy of the measuring instrument used.
  - o Can contain fractions and decimals
  - o Length, weight, time, etc.

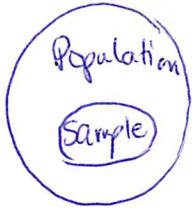
What is the difference between a population and a sample?

What is your definition of a population?

In statistics, the term **population** includes all members of a defined group that we are studying for data driven decisions

A part of the populations is called a sample.

- It is a subset of the population, a selection of individuals from the population.
- Random Samples 2 characteristics



- o Every individual has an equal opportunity of selection
- o The sample has essentially the same characteristics as the population

**Exercise 8A**

**8.2 Presenting data**

Two quick and easy ways to view data quickly and look for patterns is a frequency table and a bar chart.

Example:

A student counted how many cars passed his house in one-minute intervals for 30 minutes. His results were: 23, 22, 22, 22, 24, 22, 21, 21, 23, 23, 27, 21, 21, 22, 23, 25, 27, 26, 23, 22, 27, 26, 25, 28, 26, 22, 20, 21, ~~and~~ 20, 23

Display the data in a frequency table.

Draw a bar chart for this data.

<u># of cars per min</u>	<u>frequency</u>
20	2
21	5
22	7
23	6
24	1
25	2
26	3
27	3
28	1

