

Types of Data - Notes and Steps



Key idea

Qualitative data describes a quality in words or categories.

Quantitative data is a number you count or measure.

Sort these

Eye colour, favourite sport — **qualitative**.

Height, number of pets — **quantitative**.

Quick test

Ask: “Is the answer a word/label, or a number?”

Word $\Rightarrow$ qualitative. Number $\Rightarrow$ quantitative.

Common mistake

A number is not always quantitative.

A player's shirt **number** is a label (qualitative), not a count.

Discrete or Continuous



Key idea

Quantitative data splits in two:
Discrete — counted, only exact values (whole steps).

Continuous — measured, any value in a range.

Example

Number of pets: 0, 1, 2, 3... — **discrete**.

Height: 152.4 cm, 152.41 cm... — **continuous**.

Quick test

Could a value fall between two neighbours?

No $\Rightarrow$ discrete. Yes $\Rightarrow$ continuous.

Common mistake

“Whole numbers only” does not mean discrete.

Age is continuous — you are 14.7 years old even if you say 14.

Primary or Secondary



Key idea

Primary data you collect yourself for your own question.

Secondary data comes from a source someone else collected.

Example

Survey your own class — **primary**.

Use Stats NZ census figures — **secondary**.

Quick test

Ask: “Did I gather this data?”

Yes $\Rightarrow$ primary. No $\Rightarrow$ secondary.

Common mistake

It is about *who collected it*, not the topic.

The same fact is primary to the person who measured it, secondary to everyone reusing it.