Types of data

Mana Maths

Te reo Māori terms

raraunga
data
Open in Te Aka

kounga
quality
Open in Te Aka

rahinga
quantity/amount
Open in Te Aka

tonu
continuous
Open in Te Aka

Types of data — Foundation

1. Is ‘favourite colour’ qualitative or quantitative?

2. Is ‘height in cm’ qualitative or quantitative?

3. Is ‘number of pets’ discrete or continuous?

4. Is ‘temperature’ discrete or continuous?

5. Is ‘time taken to run 100m’ discrete or continuous?

6. Is ‘shoe size’ discrete or continuous?

7. Would ‘surveying classmates’ give primary or secondary data?

8. Would ‘using census data’ give primary or secondary data?

9. Classify: ‘eye colour’ (qualitative/quantitative).

10. Classify: ‘test score’ (qualitative/quantitative).

11. Classify: ‘age in years’ (discrete/continuous).

12. Classify: ‘weight in kg’ (discrete/continuous).

13. Give an example of qualitative data.

14. Give an example of quantitative data.

15. Give an example of discrete data.

16. Give an example of continuous data.

Types of data — Proficient

1. Classify ‘distance travelled’ as qualitative/quantitative and discrete/continuous.

2. Classify ‘blood type’ as qualitative/quantitative and discrete/continuous.

3. A student measures rainfall each day. Is this primary or secondary data?

4. A researcher uses government unemployment stats. Is this primary or secondary data?

5. Explain why ‘number of siblings’ is discrete data.

6. Explain why ‘height’ is continuous data.

7. Give an example of quantitative discrete data.

8. Give an example of quantitative continuous data.

9. Would measuring reaction times in an experiment give primary or secondary data?

10. Would analysing historical weather records give primary or secondary data?

11. Classify: ‘time spent on homework’ (qualitative/quantitative, discrete/continuous).

12. Classify: ‘favourite subject’ (qualitative/quantitative, discrete/continuous).

13. A company surveys its customers. What type of data source is this?

14. A journalist cites a published research paper. What type of data source is this?

15. Why might a researcher choose secondary data over primary data?

16. Why might primary data be more valuable than secondary data?

Types of data — Excellence

1. A scientist collects plant growth data, then compares it to a published study. Identify both data types and explain the advantage of each.

2. Classify 'GPS coordinates' as qualitative/quantitative and discrete/continuous, justifying your reasoning.

3. A market researcher uses both customer surveys and industry reports. Compare the data types and their strengths/weaknesses.

4. Explain why 'IQ score' is considered discrete data despite measuring a continuous trait.

5. A hospital tracks patient recovery times (hours) and satisfaction ratings (1-5). Classify both variables fully.

6. Discuss whether 'time of day' (e.g., 3:45 PM) is discrete or continuous, considering digital vs. analog measurement.

7. A student project uses school attendance records (secondary) and a new survey (primary). Explain the methodological implications.

8. Classify 'sound volume in decibels' considering it can be measured continuously but recorded in whole numbers.

9. A company buys consumer spending data. Why might this be preferable to collecting their own primary data?

10. For climate research, would temperature data from weather stations be primary or secondary? Justify.

11. Explain how 'movie ratings (1–5 stars)' can be considered both categorical and ordinal data.

12. A study uses 'reaction time in ms'. Classify and discuss measurement precision issues.

13. Compare primary vs. secondary data for a historical investigation vs. a scientific experiment.

14. Classify 'website click counts' considering they're whole numbers but events occur continuously in time.

15. A researcher uses both lab measurements and published meta-analysis. Evaluate the data quality trade-offs.

16. Discuss: Is ‘money in bank account’ discrete or continuous? Consider digital vs. physical currency.