Discrete and continuous data

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Classify the number of goals scored in each match. Explain. [2 marks]

Goals are counted as separate whole events.

Answer: Discrete numerical data.

2. Classify the mass of each school bag, recorded to the nearest kilogram. [2 marks]

Mass is measured. A more precise scale could record values between whole kilograms.

Answer: Continuous numerical data.

3. A student records the colour of each passing car. Is the variable numerical? [2 marks]

The values are colour groups rather than quantities.

Answer: No; it is categorical.

4. A library records borrower identification numbers. Would their mean be a useful numerical summary? Explain. [2 marks]

Identification numbers are labels; their arithmetic average has no useful meaning.

Answer: No.

5. Write one discrete variable and one continuous variable that could be recorded for school gardens. [2 marks]

Count separate plants; measure heights that may fall between scale marks.

Answer: For example, number of plants (discrete) and plant height (continuous).

6. A survey asks “How many whole books did you finish?” One response is 2.5. What should the investigator do? [2 marks]

A count of whole completed books is discrete.

The respondent may have included a partly read book; do not silently round or delete the value.

Answer: Check the response and definition before using it.