

Foundation GCSE: Using Different Types of Data

Name: _____

Class: _____

Instructions: Answer all questions. Questions are ordered from easiest (1) to hardest (20). Working out should be shown where appropriate.

1. State whether the hair colour of students in a class is qualitative or quantitative data.
2. State whether the number of pets a person owns is discrete or continuous data.
3. Give an example of primary data collected by a student investigating traffic flow.
4. Classify shoe size as discrete, continuous, or categorical data.
5. State whether measuring the height of sunflower plants yields discrete or continuous data.
6. Explain why data collected from an online encyclopedia is classified as secondary data.
7. Identify whether the time taken to run a 100m race is qualitative or quantitative data.
8. State whether car brands parked in a supermarket car park represent categorical or numerical data.
9. A researcher calculates a ratio of continuous measurements given by:

$$\frac{15.4 \text{ cm}}{3.2 \text{ cm}}$$
 State the data type of the result and calculate its numerical value.
10. Classify the monthly rainfall in millimeters as discrete or continuous data.
11. State whether a survey question asking for favorite genre of music produces numerical or categorical data.
12. Identify if the number of goals scored in a football match is discrete or continuous.
13. A scientist records temperatures as -4.5°C , 0.0°C , and 3.2°C . State whether this numerical data is discrete or continuous.
14. State whether data collected from a government census report published last year is primary or secondary data.
15. Classify the letter grades achieved in an exam (A, B, C, etc.) as quantitative or qualitative data.
16. A student counts the frequency of words in an essay. State whether this count represents discrete or continuous data.
17. Evaluate the index representing a ratio of continuous masses:

$$\frac{48.6}{12.1}$$
 State whether the input variables are continuous.
18. State whether blood group types (A, B, AB, O) represent numerical, discrete, or categorical data.
19. A data analyst processes a combined metric defined by:

$$\frac{\sqrt{144} + 8.5}{2.5}$$
 State whether the final calculated index relies on continuous or discrete source parameters.
20. Discuss why time measured to the nearest millisecond is classified as continuous quantitative data rather than discrete.

Answers & Worked Solutions

1. Qualitative data.
2. Discrete data.
3. Counting cars passing a specific junction first-hand.
4. Discrete data.
5. Continuous data.
6. Because it was gathered by someone else for another purpose.
7. Quantitative data.
8. Categorical data.
9. Continuous; 4.8125.
10. Continuous data.
11. Categorical data.
12. Discrete data.
13. Continuous data.
14. Secondary data.
15. Qualitative data.
16. Discrete data.
17. Continuous input variables; $\frac{48.6}{12.1} \approx 4.02$.
18. Categorical data.
19. Continuous source parameters.
20. Because time can take any decimal value within an interval, not just distinct integer steps.