Collecting data and writing a statistical question

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Explain why “How tall is Ava?” is not a statistical question about a group. [2 marks]

There is no group distribution to investigate.

Answer: It asks for one person's height.

2. Write a statistical question about the number of pets owned by students in one class. [2 marks]

A defined class is the group.

Number of pets is the variable and answers can differ.

Answer: For example, how many pets does each student in this Year 7 class have at home?

3. Improve “How many hours are you online?” so all students answer about the same period. [2 marks]

Specify a common day, units and what activities count.

Answer: For example, how many hours did you spend online yesterday, excluding school lessons?

4. Rewrite “Would you choose the boring old sports uniform or the great new one?” neutrally. [2 marks]

Remove wording that favours either answer.

Answer: Which uniform do you prefer: the current design or the proposed design?

5. Four students give no answer to a question about pets. Explain why adding four zeroes is wrong. [2 marks]

Zeroes would add false observations and could reduce a mean or change a mode.

Answer: No answer does not mean no pets.

6. You want to compare how far two groups can throw a beanbag. Name two collection rules that make the measurements comparable. [2 marks]

Keep conditions and definitions consistent.

Use the same units and a consistent number of attempts.

Answer: For example, use the same beanbag and measure from the same throwing line to the first landing point.