Population, census and sample

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. A club interviews 40 of its 160 current members. Identify the population and sample. [2 marks]

Distinguish the intended whole group from the observed subset.

Answer: Population: all 160 current members; sample: the 40 interviewed.

2. Every one of 36 garden trees is measured. Census or sample of those trees? [1 mark]

All 36 trees in the population are measured.

Answer: Census.

3. A survey invites 120 students; 84 reply. What is the response count? [2 marks]

Invitations and recorded responses are different; 36 did not respond.

Answer: 84.

4. A survey uses library visitors to estimate the views of all registered members. Explain a coverage issue. [2 marks]

The visitor frame differs from all registered members.

Answer: Members who rarely visit are not reached by this frame.

5. Give one reason a census of a 24-student class is practical. [2 marks]

Including all 24 is manageable and avoids excluding class members.

Answer: The small, accessible group can be reached completely.

6. A school samples 20 students from each of six year levels. Find the sample size. Does size alone prove representativeness? [3 marks]

$20 \times 6 = 120.$

Selection and response still matter.

Answer: 120; no.