Year 8 Statistics and sampling - Topic test

Name: _____ Date: _____

15 questions | 39 marks | 45 minutes

Progressive questions combine techniques, interpretation and reasoned applications. All practice data are supplied.

No calculator needed.

1. A school has 640 students and surveys 80 about lunch choices. Identify population and sample. [2 marks]

2. Every member of a class of 28 replies. Census or sample of that class? [1 mark]

3. A researcher records existing exercise habits without changing them. Which type of study? [1 mark]

4. Give a fair method for selecting 20 of 200 students. [2 marks]

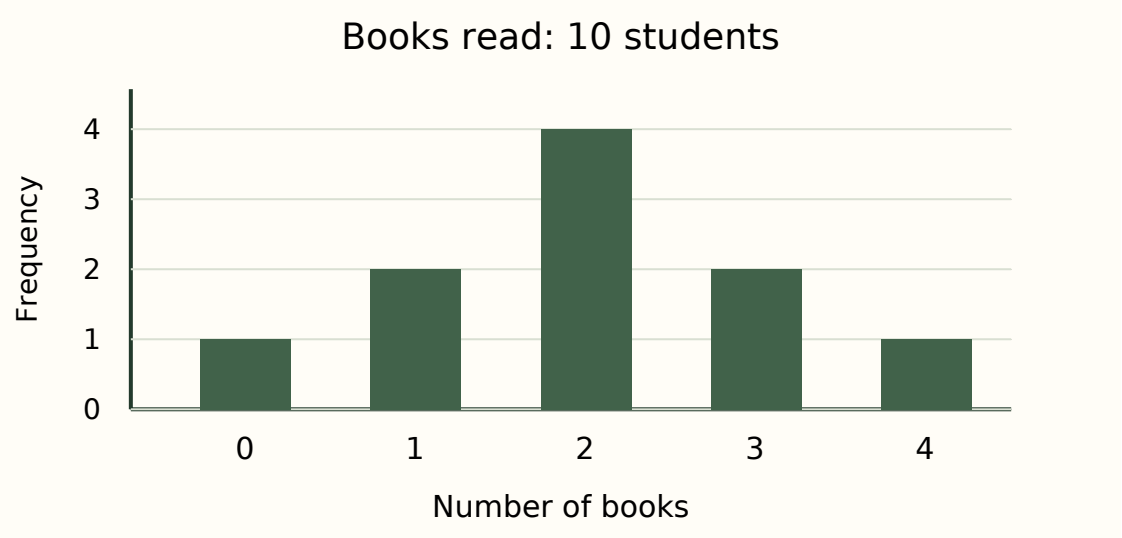
5. A systematic sample starts at 6 with interval 15. List its first four entries. [2 marks]

6. Sections contain 300 and 450 students. Allocate a proportional sample of 50. [3 marks]

7. You reuse a published transport table. Classify the source and name one check. [2 marks]

8. Find mean, median, mode and range for 4,5,5,6,10. [4 marks]

9. Use the table to find student count and mean books read. [3 marks]



Example data: books read in one week

Books	Frequency
0	1
1	2
2	4
3	2
4	1

10. Columns for counts 24 and 30 begin their vertical scale at 20. Explain the distortion. [3 marks]

11. Compare 18 of 30 with 35 of 70 as percentages. [3 marks]

12. Of 200 invitees, 120 reply and 72 say yes. State the observed percentage and a limitation. [3 marks]

13. Why might a chess-club survey misrepresent all students’ favourite lunchtime activities? [2 marks]

14. Plan a fair comparison of two paper-plane designs: name the changed factor, two controls and why to repeat. [4 marks]

15. Use the journey table to describe centre, spread and one limitation. [4 marks]

Original practice data: one-way journey times for eight sampled students

Code	Minutes
A	5
B	10
C	10
D	15
E	15
F	15
G	20
H	30