

Name: _____

Date: _____

Score: _____ / 17

Evaluating Statistical Claims

Sampling methods, misleading presentation and the questions to ask of a statistic.

Population the whole group	Sample a part of it	Bias the design favours one result	Ask how many, and who chose them?
-------------------------------	------------------------	--	---

Section A — What Is Wrong?

Name the problem.

- a survey of 12 friends generalised to a whole school = _____
- a y-axis beginning at 90 rather than 0 = _____
- "most people agree" with no source = _____
- a study funded by the company it tests = _____
- reporting only the months that support the claim = _____
- a percentage given with no base number = _____

Section B — Percentages

Round to one decimal.

- 48 of 320 as a percent = _____
- 75 of 500 as a percent = _____
- 126 of 840 as a percent = _____
- 19 of 76 as a percent = _____

Section C — Sampling Method

Name the method.

- every student in the school = _____
- every 10th name on a full list = _____
- names drawn at random = _____
- whoever answers an online poll = _____

Section D — Thinking About Statistics

Answer in a sentence.

- Why report the sample size with a percentage?
- What is the population in a school survey of 40 of 900 students?
- Name one question to ask about any statistic you read.

Evaluating Statistical Claims — Answer Key

For marking. Accept equivalent correct forms.

Section A — What Is Wrong?

- | | |
|--------------------------------|--|
| 1. sample too small and biased | 2. the change looks larger than it is |
| 3. no evidence given | 4. a conflict of interest |
| 5. cherry-picked data | 6. the percentage may hide a tiny sample |

Section B — Percentages

- | | | |
|---------|--------|--------|
| 7. 15% | 8. 15% | 9. 15% |
| 10. 25% | | |

Section C — Sampling Method

- | | |
|----------------------------|---------------------------------------|
| 11. a census | 12. a systematic sample |
| 13. a simple random sample | 14. a voluntary sample, likely biased |

Section D — Thinking About Statistics

- | | |
|---|----------------------|
| 15. a percentage of a tiny sample is unreliable | 16. all 900 students |
| 17. who was asked, and how many? | |
-