

3. Collecting Data

Starter Quiz · 课前小测

AP Statistics

Name: _____ Score: _____

1. Collecting a much larger sample using the same flawed method will remove the bias.
☐ True ☐ False
2. Which type of study can establish a cause-and-effect relationship?
☐ a well-designed experiment with random assignment
☐ any observational study
☐ a large survey
☐ a call-in poll
3. A simple random sample (SRS) of size n gives an equal chance to...
☐ every possible group of n individuals
☐ only the first n people
☐ every other person
☐ the n most convenient people
4. A phone survey never reaches people without phones. This is...
☐ undercoverage
☐ response bias
☐ nonresponse
☐ a placebo effect
5. A fake treatment (like a sugar pill) that looks real is a...
☐ placebo
☐ factor
☐ block
☐ stratum
6. A matched-pairs design is a special case of a randomized block design with blocks of size...
☐ 2
☐ 1
☐ 10
☐ the whole sample

7. In an observational study, the researcher imposes a treatment on the subjects.
☐ True ☐ False

8. Random sampling is what justifies generalizing the sample result to the population.
☐ True ☐ False

9. Blocking groups similar experimental units to remove a known source of variability.
☐ True ☐ False

10. A difference too large to be reasonably explained by chance is called statistically _____.

AP Statistics

1. **False**

Size fights random error, not bias — a flawed method stays biased at any size.

2. **a well-designed experiment with random assignment**

Only random assignment in an experiment supports causation.

3. **every possible group of n individuals**

An SRS gives every group of n an equal chance.

4. **undercoverage**

Part of the population has no chance of selection — undercoverage.

5. **placebo**

A placebo controls for the placebo effect.

6. **2**

Matched pairs = blocks of size 2.

7. **False**

Observational = watch and measure without intervening; experiments impose treatments.

8. **True**

A bias-free random method supports generalization.

9. **True**

That's exactly the purpose of blocking.

10. **significant**

That's the meaning of statistically significant.