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

7. A difference too large to be reasonably explained by chance is called statistically \_\_\_\_.

\_\_\_\_\_

8. A systematic tendency to miss the truth in the same direction is called \_\_\_\_.

\_\_\_\_\_

9. In an observational study, the researcher imposes a treatment on the subjects.

☐ True      ☐ False

10. Random sampling is what justifies generalizing the sample result to the population.

☐ True      ☐ False

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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. **significant**

That's the meaning of statistically significant.

8. **bias**

Bias is systematic, directional error that doesn't average out.

9. **False**

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

10. **True**

A bias-free random method supports generalization.