

Competition Corner: Design Decisions

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Original fictional data-design challenges. No procedure or testing is implied.

Challenge 21. Fictional Condition A gives 2.1, 2.3, 2.2 units; Condition B gives 2.7, 2.8, 2.9 units. Find both means and half-ranges. Give a cautious comparison, then identify two controls or confounders needed before a causal claim.

Challenge 22. A fictional design changes concentration and temperature together, then observes a signal change. Explain why the design cannot isolate one variable. Redesign it as a paper-data matrix with a named control, replicates, and a stated decision rule.