

# Lecture 1 Review Quiz

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Mallick Hossain

University of Pennsylvania

# Questions About Class Logistics

1. Have you logged into Piazza?
  - The correct answer is “Yes”
2. Have you chosen a grading scheme?
  - If you answered “Yes” to (1), then you’ve probably already answered this one too

# Real Questions

1. What's the difference between a parameter and a statistic?
  - A parameter is a characteristic of a *population* and a statistic is a characteristic of a *sample*.
2. Describe the two kinds of errors that can affect statistics.
  - *Sampling* errors are random differences between the sample and the population, but they should cancel out as the sample size grows
  - *Nonsampling* errors are systematic differences between the sample and the population and will not cancel out as the sample grows larger
3. What is a confounder?
  - A factor that influences both the treatment and the outcome. It masks the true effect of the treatment
4. What's the best way to show causation?
  - Double-blind randomized control trial

# Real Questions

5. What are the different types of variables?

- *Discrete* variables can take on a countable number of values
- *Continuous* variables can take any value
- *Nominal* variables are simply categories
- *Ordinal* variables have a natural ordering
- *Interval* variables have meaningful differences, but do not have a natural zero
- *Ratio* variables have meaningful differences and ratios, have a natural zero

6. What is the formula for percentile?

- $\frac{P}{100} * (n + 1)\text{position}$

7. Ready for the next lecture?

- The correct answer is “Yes”

