

Section 1.3

The Process of Statistical Analysis

① Identify the research question.
→ Understand the context of the problem.
→ Ask a question that's answerable through data.
Ex: Math Bridge Program: Math + Counseling
Q: Do Math bridge students do better than other math students?

② Decide what to measure.
→ Quantities
Ex: Grades
4 pt. Scale.
→ Categorical Data
Ex: Pass/Fail events.

③ Gather Data.

Describing Populations?

↓
Gather Representative Samples.

↓
Random samples.

Describe Treatment Effect?

↓
Divide Sample into similar groups.

↓
Random Assignment.

population.

Gather Data

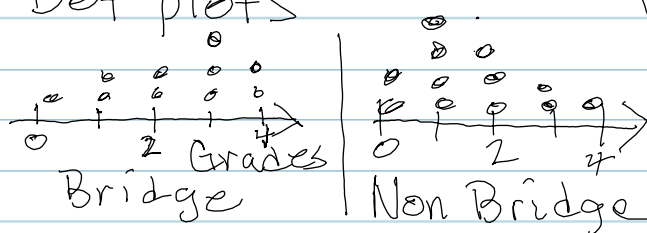
Make Sample inference

⑤ Make an Inference.

About a population
→ If the sample represents the population.
About a treatment
→ If the sample is divided into similar groups.

④ Summarize Data.

Quantities: Averages
Dot plots



Categorical: Proportions
Bridge Non Bridge

