



ORGANIZING A STATISTICAL PROBLEM: A Four-Step Process

STATE: What is the practical question, in the context of the real-world setting?

PLAN: What specific statistical operations does this problem call for?

SOLVE: Make the graphs and carry out the calculations needed for this problem.

CONCLUDE: Give your practical conclusion in the setting of the real-world problem.



CONFIDENCE INTERVALS: The Four-Step Process

STATE: What is the practical question that requires estimating a parameter?

PLAN: Identify the parameter, choose a level of confidence, and select the type of confidence interval that fits your situation.

SOLVE: Carry out the work in two phases:

1. **Check the conditions** for the interval you plan to use.
2. Calculate the **confidence interval**.

CONCLUDE: Return to the practical question to describe your results in this setting.



TESTS OF SIGNIFICANCE: A Four-Step Process

STATE: What is the practical question that requires a statistical test?

PLAN: Identify the parameter, state null and alternative hypotheses, and choose the type of test that fits your situation.

SOLVE: Carry out the test in three phases:

1. **Check the conditions** for the test you plan to use.
2. Calculate the **test statistic**.
3. Find the **P-value**.

CONCLUDE: Return to the practical question to describe your results in this setting.

