

SECTION OVERVIEW

8.1: Inference for Numerical Data

Chapter 4 introduced a framework for statistical inference based on confidence intervals and hypotheses. In this chapter, we encounter several new point estimates and scenarios. In each case, the inference ideas remain the same:

1. Determine which point estimate or test statistic is useful.
2. Identify an appropriate distribution for the point estimate or test statistic.
3. Apply the ideas from Chapter 4 using the distribution from step 2.

Each section in Chapter 5 explores a new situation: the difference of two means (5.1, 5.2); a single mean or difference of means where we relax the minimum sample size condition (5.3, 5.4); and the comparison of means across multiple groups (5.5). Chapter 6 will introduce scenarios that highlight categorical data.

8.1.1: One-Sample Means with the t Distribution

8.1.2: Paired Data

8.1.3: Difference of Two Means

8.1.4: Power Calculations for a Difference of Means (Special Topic)

8.1.5: Comparing many Means with ANOVA (Special Topic)

8.1.6: Exercises

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