

8.6: Introduction to Hypothesis Testing

What you'll learn to do: Given a claim about a population, construct an appropriate set of hypotheses to test and properly interpret p values and Type I / II errors.

		Reality	
		H_0 False	H_0 True
Test	Reject H_0	✓ Correct rejection H_1 = Power = $1 - \beta$	✗ Type I error = α
	Accept H_0	✗ Type II error	✓ Correct acceptance of H_0

Hypothesis testing is part of inference. Given a claim about a population, we will learn to determine the null and alternative hypotheses. We will recognize the logic behind a hypothesis test and how it relates to the P-value as well as recognizing type I and type II errors. These are powerful tools in exploring and understanding data in real-life.

Contributors and Attributions

CC licensed content, Shared previously

- Concepts in Statistics. **Provided by:** Open Learning Initiative. **Located at:** <http://oli.cmu.edu>. **License:** [CC BY: Attribution](#)
- Inferential Statistics Decision Making Table. **Provided by:** Wikimedia Commons: Adapted by Lumen Learning. **Located at:** https://upload.wikimedia.org/Wikipedia/commons/thumb/e/e2/Inferential_Statistics_Decision_Making_Table.png/120px-Inferential_Statistics_Decision_Making_Table.png. **License:** [CC BY: Attribution](#)

This page titled [8.6: Introduction to Hypothesis Testing](#) is shared under a [CC BY 4.0](#) license and was authored, remixed, and/or curated by [Lumen Learning](#).