Hypothesis testing

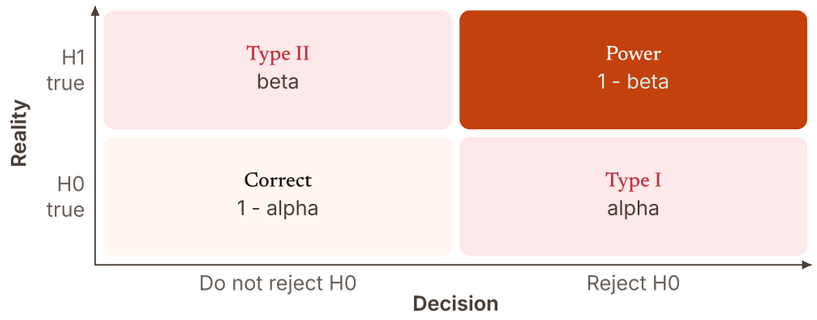
Exam Mon, 7 Dec 2026 · 180 min

1 Hypothesis test steps



State H0 and H1 first, only then look at the data.

2 Type I and Type II errors



Alpha is the probability of a Type I error; power is 1 minus the probability of a Type II error.

EXAM LIKELIHOOD

p-value	97%
t-test (one-sample, two-sample, paired)	95%
Analysis of variance (ANOVA) and F-test	93%
Chi-square test: goodness of fit and independence	92%
Type I and Type II error	92%
Likert item versus Likert scale (composite score)	90%

COMMON MISTAKES

- ✖ Linked data with a two-sample t-test. Several t-tests for three groups.
- ✖ Not significant is not no effect. Significant is not important.

HOW TO WRITE THE ANSWER

1. Term
model or concept, English term

2. Definition
definition or features, precisely

3. Case fact
concrete fact from the case

4. Conclusion
judgement, advice or consequence

KEY CONCEPTS

H0 · H1 · alpha · p-value · critical value · rejection region · Type I error · Type II error · power · one-sided · two-sided · t-test · paired t-test · ANOVA · z-test · chi-square test · Likert scale · reverse coded · Cronbach's alpha