

300 Quals Guide

June 23, 2025

1 Stein Estimator

Setup: $\mathcal{N}(\mu, \sigma^2)$ with σ^2 known.

Fact 1 (UMVU is not admissible in $\mathcal{N}(\mu, 1)$ model)

Because James Stein renders X inadmissible.

2 Bayes Estimators

Fact 2 (Unique Bayes is Admissible)

Idea is

Proof. If the

□

3 UMVU

4 MRE

5 Minimax