

Section 10.4 — Example

Problem: (Parts of exercise 10.80) An experiment was conducted to compare the mean lengths of time required for the bodily absorption of two drugs A and B. Ten people were randomly selected and assigned to receive drug A, eleven people were randomly selected to receive drug B. The length of time (in minutes) for the drug to reach a specified level in the blood was recorded, and the data summary is given in the table:

	Drug A	Drug B
n	10	11
\bar{x}	27.2	33.5
s^2	16.36	18.92

1. What needs to be assumed to run a test for the difference in mean times to absorption for the two drugs? Does this seem valid?
2. Do the data provide sufficient evidence to indicate a difference in mean times to absorption for the two drugs? Test using $\alpha = .05$.
3. What can be said about the p -value for the hypothesis test?
4. Find a 98% confidence interval for the difference in mean times to absorption.