Conclusions for a Hypothesis Test

Traditional Method

**Reject Ho** if the test statistic falls in the critical region.

![Diagram of Traditional Method]

**Fail to Reject Ho** if the test statistic does NOT fall in the critical region.

![Diagram of Traditional Method]

P-Value Method

**Reject Ho** if the P-Value is \( \leq \alpha \) (alpha, the significance level).

\[
P - Value = 0.03 \quad \alpha = 0.05
\]

**Fail to Reject Ho** if the P-Value is \( > \alpha \) (alpha, the significance level).

\[
P - Value = 0.06 \quad \alpha = 0.05
\]

One Sentence Statement

see p. 377 Flow Chart

**OR**

If the claim is Ho (null hypothesis) then the key word is “...reject”

- If we Reject Ho then we say: “There is sufficient evidence to reject the claim that...”
- If we Fail to Reject Ho then we say: “There is not sufficient evidence to reject the claim that...”

If the claim is \( H_1 \) (alternative hypothesis) then the key word is “...support”

- If we Reject Ho then we prove \( H_1 \) and say: “There is sufficient evidence to support the claim that...”
- If we Fail to Reject Ho then we fail to prove \( H_1 \) and say: “There is not sufficient to support the claim that...”