Main Steps in Conducting a Hypothesis Test

1. Describe (in words) the population parameter under investigation.

2. Determine H_o and H_a based on the problem description.

3. Select α = P(Type I error) for the test.

4. State the form of the test statistic. Be sure to list all assumptions associated with the use of this test statistic.

5. Collect data and compute the value of the test statistic.

6. Determine the P-value associated with the test statistic.
   Compare the P-value with the α-value.

7. IMPORTANT: State conclusion in the context of the problem and reiterate the α-value used. That is, "P-value $\leq \alpha$ so reject H_o" should be restated, for example, as "sample evidence suggests that the population mean height red pine seedlings differs from 1.9cm using $\alpha = 0.05$".