Guidelines for Hypothesis Testing

1. State the claim mathematically and verbally. Identify the null hypothesis $H_0$ and the alternative hypothesis $H_a$.
2. Specify the level of significance $\alpha$.
3. Determine critical values using appropriate tables or calculator.
4. Determine the rejection regions.
5. Find the standardized test statistic.
6. Decide to reject the null hypothesis or fail to reject the null hypothesis.
7. Interpret decision in context of original claim using the table below.

<table>
<thead>
<tr>
<th>Decision</th>
<th>Claim is $H_0$</th>
<th>Claim is $H_a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reject $H_0$</td>
<td>There is enough evidence to reject the claim</td>
<td>There is enough evidence to support the claim</td>
</tr>
<tr>
<td>Fail to reject $H_0$</td>
<td>There is not enough evidence to reject the claim</td>
<td>There is not enough evidence to support the claim</td>
</tr>
</tbody>
</table>

**Decision Rule**

1. If $P \leq \alpha$, then reject $H_0$
2. If $P > \alpha$, then fail to reject $H_0$