Statistical Inference

The standard deviation of sampling distribution of mean is called **standard error**.

Variance of sampling distribution of sample mean = population variance/sample size

s.d of sampling distribution of mean/standard error = population sd/sqrt(samples size)

Hypothesis Testing: Steps –

**Step 1:** Define the Null Hypothesis, Alternate Hypothesis and the level of significance .

**Step 2:** Calculate the probability of getting the observed data (P value) assuming the null hypothesis to be true. This involves two intermediate steps as given below.

**Step 2.1:** Calculate the Z statistic

**Step 2.2:**Calculate the P value

**Step 3:** Conclude whether to reject the null hypothesis or not based on the P value i.e

If  P value < significance level, then reject the NULL hypothesis

If  P value >= significance level, the NULL hypothesis can not be rejected

**Step 4:** State the conclusion.