

Hypothesis Test – Software Tool Effect on Task Completion Time

Let:

- μ_B = Mean completion time **before** using the new software
- μ_A = Mean completion time **after** using the new software

We want to detect if the **improvement** (reduction in time) is **more than 2 minutes**, i.e., whether:

$$\mu_B - \mu_A > 2$$

This is a **one-sided (right-tailed) test**.

Null Hypothesis (H_0):

$$\mu_B - \mu_A \leq 2$$

Alternative Hypothesis (H_1):

$$\mu_B - \mu_A > 2$$