For this project we use 2 hypotheses and they are:

1. Downtime Reduction Hypothesis

- **Null Hypothesis (H_0):**
  The average machine downtime is **greater than or equal to 30 hours**.
  H0:μ≥30H_0: \mu \geq 30H0:μ≥30
- **Alternative Hypothesis (H_1):**
  The average machine downtime is **less than 30 hours** (targeting 18 hours).
  H1:μ<30H_1: \mu < 30H1:μ<30

2. Breakdown Frequency Reduction Hypothesis

- **Null Hypothesis (H_0):**
  The average breakdown frequency is **greater than or equal to 10** per time period.
  H0:μ≥10H_0: \mu \geq 10H0:μ≥10
- **Alternative Hypothesis (H_1):**
  The average breakdown frequency is **less than 10** (targeting 5).
  H1:μ<10H_1: \mu < 10H1:μ<10