Lab 1 : One sample t test

Solution





The histogram shows box-and-whisker plot shwos the data is left skewed. The data is approximately normally distributed which meets one f the fundamental assumptions of t test mean.

Descriptive Statistics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N | Mean | StDev | SE Mean | 95% CI for μ |
| 50 | 49.620 | 6.577 | 0.930 | (47.751, 51.489) |

*μ: mean of Weight of Ring*

The 95% confidence interval for mean weight of metal ring is between 47.75 and 51.49 ounce. The distribution shift is slightly towwwards left of mean value of ounce. The specification has not been slightly met.

Hypothesis

Test

|  |  |
| --- | --- |
| Null hypothesis | H₀: μ = 50 |
| Alternative hypothesis | H₁: μ ≠ 50 |

|  |  |
| --- | --- |
| T-Value | P-Value |
| -0.41 | 0.685 |

Since p-value (0.685) is greater than significance probability (0.05), we accept null hypothesis i.e. the mean weight of metal ring is 50 ounce.