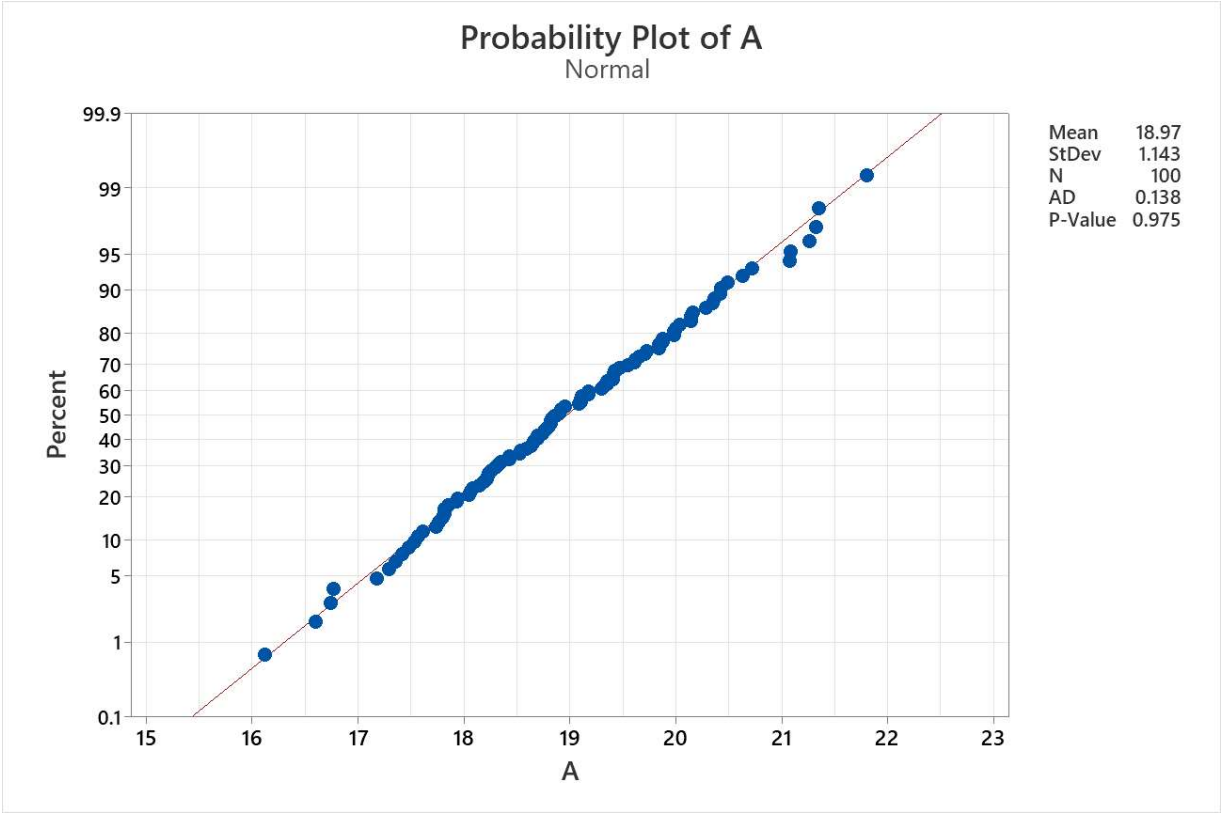
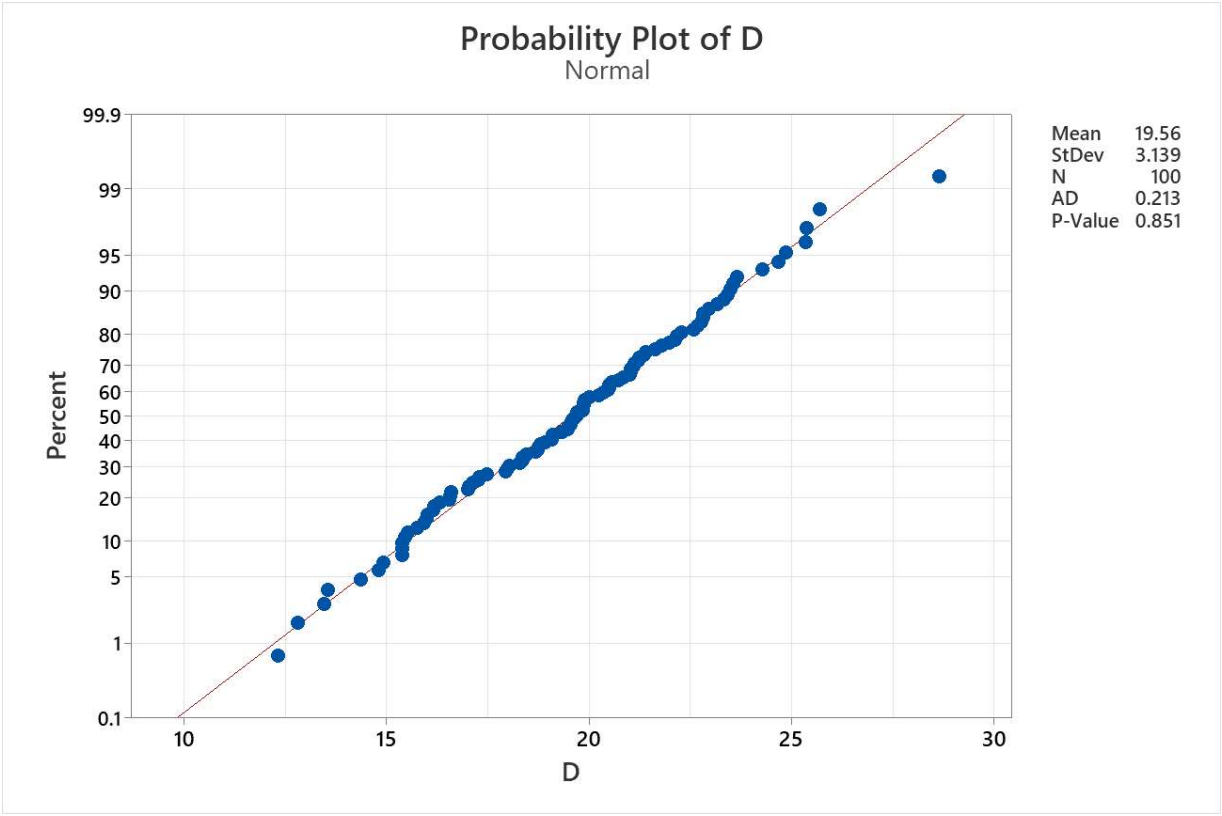
Report

Ensure Normality

Stat -> Basic Stat -> Normality Test





1 Sample T

Stat -> Basic Stat -> 1-Sample t

Add a boxplot
Perform hypothesized test against the mean=20 for A :
In options specify alternative hypothesis as "less than" 20

Conclude: reject the null hypothesis. Population mean is less than 20

Descriptive Statistics

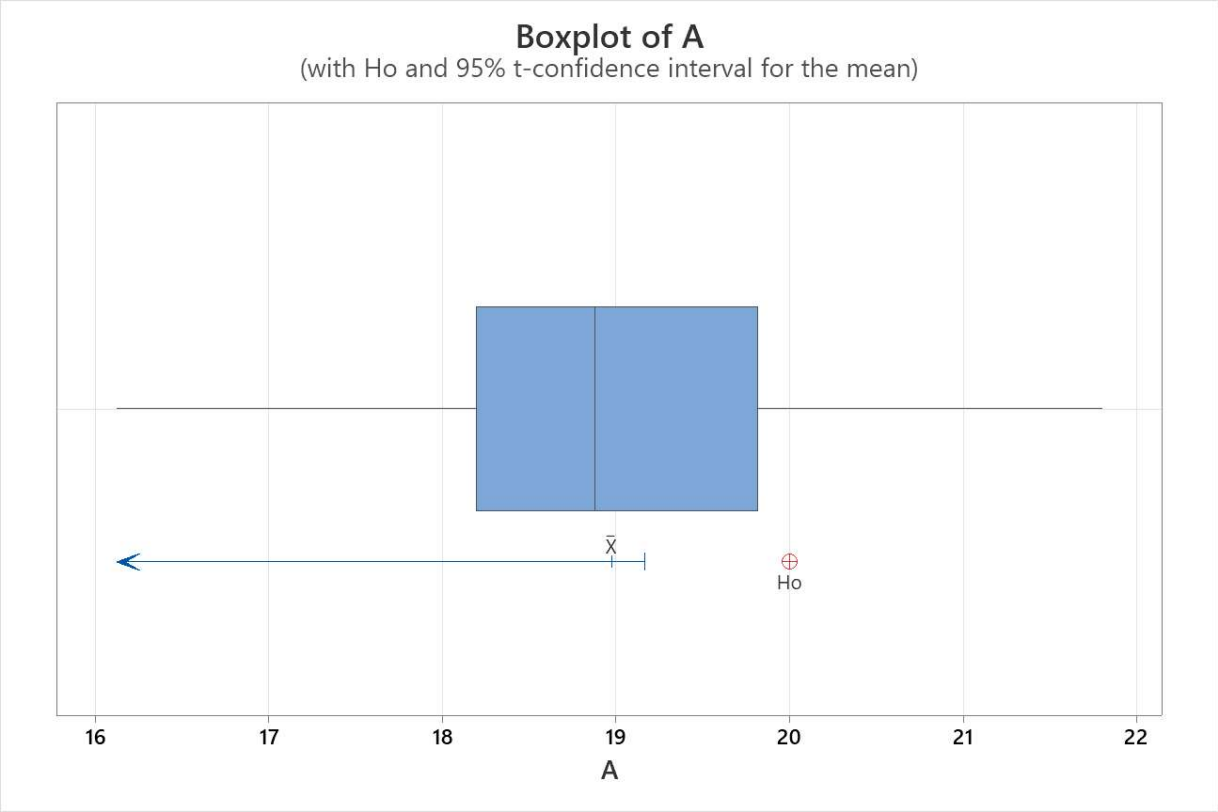
N	Mean	StDev	SE Mean	95% Upper Bound for μ
100	18.975	1.143	0.114	19.165

μ: population mean of A

Test

Null hypothesis	H_0: μ = 20
Alternative hypothesis	H_1: μ < 20

T-Value	P-Value
-8.97	0.000



2 Sample T

Stat -> Basic Stat -> 2-Sample t
Each sample is in its own column
Add a boxplot

Conclusion: fail to reject the null hypothesis. There is no difference between A and D.

Method

Descriptive Statistics

μ_1: population mean of A
μ_2: population mean of D
Difference: $\mu_1 - \mu_2$

Sample	N	Mean	StDev	SE Mean
A	100	18.97	1.14	0.11
D	100	19.56	3.14	0.31

Equal variances are not assumed for this analysis.

Estimation for Difference

Difference	95% CI for Difference
-0.586	(-1.247, 0.076)

Test

Null hypothesis $H_0: \mu_1 - \mu_2 = 0$
Alternative hypothesis $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-1.75	124	0.082