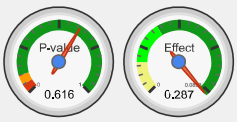
Shapiro-Wilk Test Calculator

Reporting Shapiro-Wilk test in APA Format

The Shapiro-Wilk test did not show a significant departure from normality, $W(5) = .91$, $p = .616$

Parameter	Value
P-value	0.6157
W	0.9135
Sample size (n)	5
Average ($\bar{x}$)	9.8
Median	9
Sample Standard Deviation (S)	1.6432
Sum of Squares	10.8
b	3.141
Skewness	0.5184
Skewness Shape	Potentially **Symmetrical** (pval=0.57)
Excess kurtosis	-1.6872
Kurtosis Shape	Potentially **Mesokurtic**, normal like tails (pval=0.399)
Outliers	



Shapiro-Wilk-test, using tables as distribution (right-tailed)

Since n≤50 we used the Shapiro-Wilk tables to calculate the p-value.
The normal distribution chart is only for visualzation.

1. H_0 hypothesis

Since p-value > α, we accept the H_0.
It is assumed that the data is normally distributed.
In other words, the difference between the data sample and the normal distribution is not big enough to be statistically significant. A non-significance result can not prove that H_0 is correct, only that the null assumption can not be rejected.

2. P-value

The p-value equals **0.6157**, (P(x≤-0.2943) = 0.3843). It means that the chance of type I error, rejecting a correct H_0, is too high: 0.6157 (61.57%). The larger the p-value the more it supports H_0.

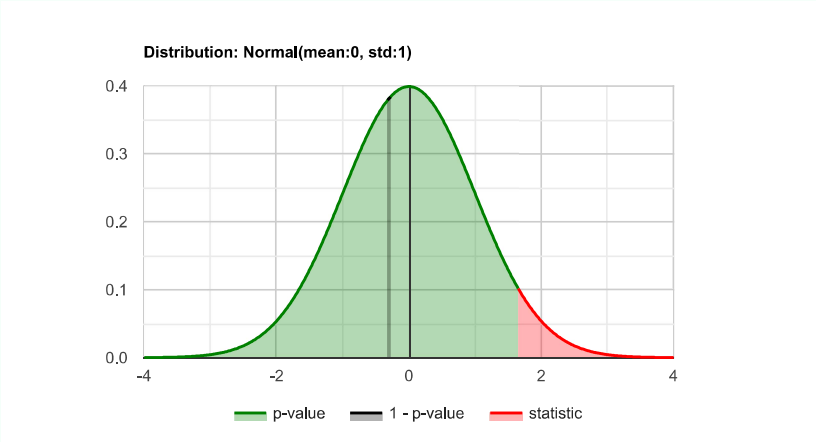
3. Test statistic

The test statistic **W** equals **0.9135**, which is in the 95% region of acceptance: [0.7508, 1].

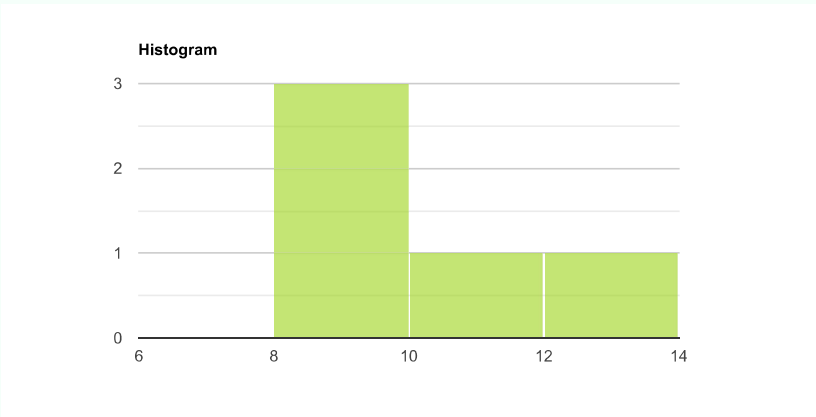
4. Effect size

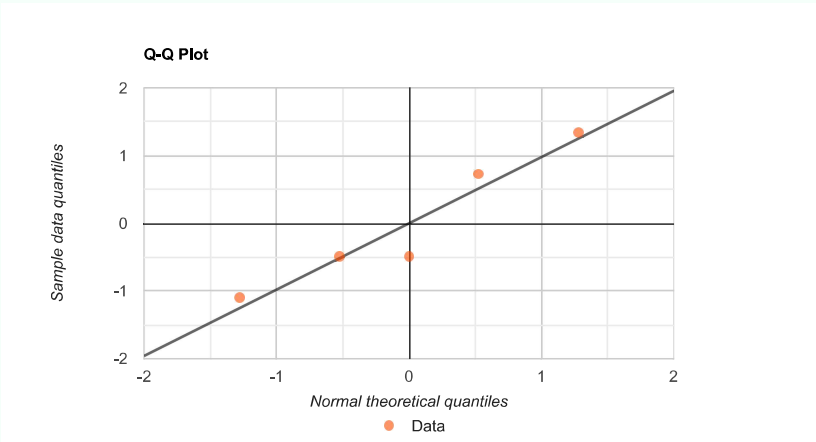
The observed effect size **KS - D** is **large**, **0.2868**. This indicates that the magnitude of the difference between the sample distribution and the normal distributions is large.

Since the null assumption cannot be rejected, you may ignore the effect size.



Significance level (α)





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