

Sign test ---

Advantages - **The sign test is** the simplest of all distribution-free statistics and carries a very high level of general applicability .

Dis - only the number of positive and negative differences in paired samples can be included in the calculation .

Wilcoxon rank sign test –

Adv -- it neither depends on the form of the parent distribution nor on its parameters .

Dis -- may produce misleading results if many measurements are the same value .

Wilcoxon rank sum test –

Adv -- it neither depends on the form of the parent distribution nor on its parameters .

Dis -- it simply allocates a sign to each observation, according to whether it lies above or below some hypothesized value, and does not take the magnitude of the observation into account .

Mann whitney u test –

Dis –

- Lengthy calculation - prone to human error.
- Does not explain why there is a difference.
- More appropriate when the data sets are independent of each other.
- More appropriate when both sets of data have the same shape distribution.
- Become less accurate when the sample size is below 5 or above 20

Adv –

- States whether the difference is significant or occurred by chance.
- Shows the median between 2 sets of data.
- You can use data sets of different sizes.
- Good with dealing with skewed data so data doesn't need to be normally distributed

Krushlkal waits test –

Adv –

- Nonparametric. ...
- Multiple groups. ...

- 3. Box-plot comparison. ...
- Applicable to any industry. ...
- ANOVA is not always the best option. ...
- Determining if a group originates from the others. ...
- Groups and sample size. ...
- Reject the null hypothesis

Dis –

not as powerful as other parametric tests, such as ANOVA .