

# Tests Checklist

## Tests for Numeric Data:

1. **One-sample t-test:** Tests if the population mean is equal to a specified value.
2. **Independent samples t-test:** Tests if the means of two independent groups are equal.
3. **Paired samples t-test:** Tests if the means of two dependent groups are equal.
4. **One-way ANOVA:** Tests if the means of three or more independent groups are equal.
5. **Repeated measures ANOVA:** Tests if the means of three or more dependent groups are equal.
6. **Pearson's correlation:** Measures the degree of the relationship between two numeric variables.
7. **Linear regression:** Models the relationship between two or more numeric variables.

## Non-parametric alternatives

For numeric data (when assumptions of above tests are violated) include:

1. **Wilcoxon Signed-Rank Test:** Equivalent to the paired samples t-test.
2. **Mann-Whitney U Test:** Equivalent to the independent samples t-test.
3. **Kruskal-Wallis Test:** Equivalent to the one-way ANOVA.
4. **Spearman's Rank Correlation:** Equivalent to Pearson's correlation.

## Tests for Categorical Data:

1. **Chi-square test for goodness of fit:** Tests if the distribution of categories in a single variable matches an expected distribution.
2. **Chi-square test for independence:** Tests if there is a relationship between two categorical variables.
3. **Fisher's exact test:** Used when sample sizes are small, it tests if there is a relationship between two categorical variables.
4. **Binomial test:** Tests if the proportion of successes in a single binary variable matches an expected proportion.
5. **McNemar's test:** Tests if the proportions of two paired binary variables are equal.

Note: In most cases, the choice of test depends not only on whether the data is numeric or categorical, but also on other factors like the number of groups being compared, whether the groups are independent or dependent, and the distribution of the data.