1. one sample t-test (z-test if assuming that we know σ)

   - one sample, testing population mean against a parameter

2. independent samples t-test

   - two independent samples (categorical independent variable, men/women), continuous dependent variable (optimism), samples are of the same size and N>30 in both group, which means that assumptions for parametric test are met

3. Pearson's correlation

   - two continuous variables implicate correlation, both are measured at the interval scale with normal distribution, so we can use parametric correlation

4. ANOVA

   - three independent samples (categorical independent variable), dependent variable is continuous, assumptions for parametric test are met

5. Kruskal-Wallis test

   - same question, but assumptions for parametric test are broken

6. Spearman's correlation

   - two continuous variables imply correlation, one has substantially skewed distribution, so assumptions for parametric correlation are violated and we use a non-parametric one

7. paired samples t-test

   - testing means between two samples in repeated measures design, which implies a paired test, assumptions for parametric test are met

8. chi-square (goodness of fit) test

   - 1 sample, categorical dependent variable

9. Mann-Whitney test

   - two independent samples (categorical independent variable), continuous dependent variable (empathy), assumptions for parametric test are violated, because the homogeneity of variances is not met, which follows from large difference in sample sizes

10. chi-square test

    - two categorical variables – studies program (full-time/combined) and preference (yes/no)

11. paired samples t-test

    - two paired (or dependent) samples – pairs of siblings, continuous dependent variables, assumptions for parametric tests are met

12. McNemar's test

    - still two paired samples – pairs of siblings, but categorical dependent variable, so two categorical variables with paired samples

13. Spearman's correlation

- two continuous variables imply correlations, grades are measured on ordinal scale, so we use non-parametric correlation

14. Pearson's correlation

    - two continuous variables – preparation time and number of points from test – imply correlation, both variables are measured on ration scale, so assumptions for parametric tests are met

15. McNemar's test

    - repeated measures (test-retest) design, so we have two paired samples, the dependent variable is categorical (willingness to donate – yes/no)

16. ANOVA (or Kruskal-Wallis test if assumptions are broken)

    - we have categorical independent variable (5 categories of color preference) and continuous dependent variable. We don't know whether the assumptions for parametric tests are met, so we have to state that we use ANOVA if assumptions are met and we use Kruskal-Wallis test if they are violated

17. Kruskal-Wallis test

    - one categorical variable (color preference), one continuous variable (grades), the dependent continuous variable is measured on ordinal scale, so we have to use a non-parametric test

18. paired samples t-test (or Wilcoxon test if assumption were broken)

    - we have two paired samples – couples and continuous dependent variable (satisfaction), we use paired samples t-test is assumptions for parametric tests are met and Wilcoxon test if they are violated

19. Spearman's correlation

    - two continuous variables imply correlation, assumptions are violated, so we use non-parametric correlation

20. one sample t-test

    - we are testing a mean in one sample against value 50

21. McNemar's test

    - paired samples, categorical dependent variable

22. independent samples t-test

    - two independent samples and continuous interval dependent variable, the number of 35 children in both samples tells us that the assumptions for parametric test are met

23. Wilcoxon test

    - paired samples, repeated measures design (students before and after extra tuition) and ordinal dependent variable

24. Mann-Whitney test

- two independent samples, interval dependent variable, but assumptions for parametric test are violated

25. Kruskal-Wallis test

    - three independent groups, ordinal dependent variable, so we have to use non-parametric test

26. chi-square test

    - two categorical variables