KNR 445: Cheat sheet for final – or how to choose between analyses

The analyses we have covered (or will cover) in the second half of the semester are:

- Z-test;
- single-sample t-test;
- independent samples t-test;
- dependent samples t-test;
- one-way ANOVA
- Factorial ANOVA
- Repeated Measures one way ANOVA (RM 1-way)

One dependent variable only (only one sample): Z-test and single-sample t-test

- Choose z-test when you know the population SD, t-test when you don’t

One dependent variable and one independent variable: independent samples t-test; dependent samples t-test; one-way ANOVA; RM 1-way ANOVA

- If there are only two levels of the independent variable, eliminate one-way ANOVA and RM 1-way ANOVA. Choose either independent samples t-test, or dependent samples t-test
  - If the same people are measured more than once, choose dependent sample t-test
  - If different people are each measured once, choose independent samples t-test

- If there are >2 levels of the independent variable, eliminate independent samples t-test and dependent samples t-test. Choose either one-way ANOVA or RM 1-way ANOVA:
  - If the same people are measured more than once, choose RM 1-way ANOVA
  - If different people are each measured once, choose 1-way ANOVA

One dependent variable, more than one independent variable:

- Choose Factorial ANOVA