

4. Sampling Distribution

1. **Perform random sorting** of mice dataset in order to select 10 random male mice and 10 random female mice.
2. Generate 6 columns of 1000 standard uniform random variables (SURV) in each
 - a) Build a distribution of mean on 2 (any) out of 6 SUVR
 - b) Build a distribution of mean on 4 (any) out of 6 SUVR
 - c) Build a distribution of mean on all 6 SUVR
3. Generate 16 columns of 100 standard normal random variables (SNRV) in each
 - a) Calculate mean and standard deviation for each row (i.e. 100 means and st.dev)
 - b) Calculate **standard error** (st.dev of 100 means)
 - c) Calculate **average standard deviation for the data** (pls, remember how to do this!)
 - d) Investigate relations b/w **standard error** and **average st. dev of original data**
4. see Preparation to Test 1