Lab Session 4

Outline of lab session:

- brief follow-up from lecture: statistical inference (4L−13/14/15),
- Minitab demonstrations:
  - probability distribution calculations: overview on 4L−3/12 for normal/binomial distributions[1]; note also the rules:

$$\binom{n}{0} = 1, \quad \binom{n}{1} = n, \quad \binom{n}{2} = n(n-1)/2.$$

  - probability plots and normality tests,[2]
- individual work on exercises, and discussion/questions: 3:77,79,74; x:7; 1:110,127,111,113,117,121,145; 5:33; x:**4**(c); 5:**49,51**; x:8; **home assign.2001:1** (1:123,144; 4:10,60; 5:47,53; x:9; AI:5)
- note: recommended order; **bold** → lab review.
- summary worksheets (for lab review): S.2:2, S.4:3.

Notes and questions for specific exercises:

- 1.110, 1.111, 1.117, 1.121: for some of these, compute *both* using statistical table and software, then use your preferred method,
- 1.123, 1.127: calculate first the results by standardization, check them afterwards using software.
- 1.145: the data have 224 obs.; `sex` is coded as 1(men)/2(women),
- 5.49, 5.51: compute the probabilities both using statistical table and Minitab/Stata/R,
- home2001.1: data and solution at exercises webpage.

[1] `Calc-Probability Distributions` and `Graph-Probability Distribution Plot` menus.
[2] `Graph-Probability Plot` or `Stat-Basic Statistics-Normality Test` menus;
Stata commands/R functions for quantile plots: `qnorm`/`qqnorm` (for normality tests → Lecture 4).