

NOTES FOR EXERCISES IN SESSION 4

- x:7; 1:110,127,111,113,117,121,145; 5:33; x:4(c); 5:49,51; home assign.2001:1; x:8 (1:123,144; 4:10,60; 5:47,53; x:9)

Outline of lab session:

- scheduling issues: lab review and midterm exam,
- follow-up from lecture: binomial and Poisson distrib. (4L–12/13/17),
- Minitab demonstrations:
 - * prob. distrib. calculations: overview on 4L–3/12 for normal/binomial distrib.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 (note: recommended order, and extras).

Notes and questions for specific exercises:

- 1.110, 1.111, 1.117, 1.121: for some of these, compute *both* using statistical table and Minitab/Stata/R; for the rest, 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: `qnorm/qnorm` (quantile plot) and `swilk, sfrancia, sktest/shapiro.test` (normality test).