

STATISTICS 2
WS 2023/24 (Mag. Thomas Forstner)

Course-Number: 366.554

- 6) In a sample of 11 persons 2 persons are current smoker.
- a) Calculate an asymptotic 90% confidence interval for the proportion of current smoker.
 - b) Calculate an exact 90% confidence interval for the proportion of current smoker.
- 7) An outbreak of Salmonella-related illness was attributed to ice cream produced at a certain factory. The level of Salmonella in 10 random samples of this ice cream was measured. The levels were:

most probably number per gram									
13	14	12	11	16	16	17	20	20	21

most probably number ... counting method for the number of Salmonella bacteria

- a) Calculate a 95% confidence interval for the true mean Salmonella count based on the sample above.
- b) Construct a test to verify if the “true mean” Salmonella count differs from $\mu_0 = 14$ (type I error = 5%, normality can be assumed).