13) In example 7 the statistical analysis of an outbreak of Salmonella-related illness showed no statistically significant difference of the most probably number per gram from the reference value 14.

How large has the sample size to be, that there is a chance for discovering a statistically significant difference (type I error = 5%, type II error = 20%)?

14) Someone is interested, whether there is a statistically significant difference between the delivery times of Chinese Food to his home from Company A and Company B.

The table below presents the time in minutes for a sample of deliveries:

Company A – time [min]: 11   37   32   27   29   29   27   31   14
Company B – time [min]: 52   38   51   48   49   52   28   17   16

Construct an appropriate test for verifying, if there is a statistically significant difference between the delivery times of these companies (type I error = 5%).

15) The weight of 6 people was examined before and after they quit smoking.

Construct an appropriate test for verifying, if there is a difference between the weight before and after the person quits smoking (type I error = 5%). Because of some outliers, normality of the data cannot be assumed.

Person	1	2	3	4	5	6
Weight [kg] before quitting	54.5	60.4	85.6	78.2	120.6	121
Weight [kg] after quitting	55.5	69.6	86.7	81.6	116.5	115