1. Data Presentation and Descriptive Statistics

Data are located at http://edu.sablab.net/data/xls

1. (a) Build a cross-tabulation (pivot table) for man and women beer preferences. (b) Transform pivot table into relative frequency table (probabilities) for men and women. (c) Illustrate your findings using bar chart. (***beer.xls***)

2. Based on ***cancer*** data set calculate mean and median survival time for men and women subpopulations. (***cancer.xls***)

3. (a) Calculate correlation between temperature and heart rate of a frog. (b) Illustrate by scatter-plot (***rana.xls***)

4. Look on the teeth growth data for guinea pigs, treated by different doses of vitamin C (VC) and orange juice (OJ). Calculate and compare mean teeth growth effect for minimal and maximal doses of vitamin C and orange juice (***teeth.xls***).

Work with ***mice*** data:

5. (a) Calculate the period of time, during which experiment last for each mice. (b) Calculate average and median time for all mice. (***mice.xls***)

6. Calculate the mean ending weight of male and female mice (separately for each sex).

7. Consider 50 heaviest mice in the group. Build and draw the frequency distribution for their sex.

8. Estimate the probability that a randomly selected mouse is lighter than 20 grams?

9. Estimate the probability that a randomly selected mouse has a bleeding time bigger than 1 minute?

10. Provide mean, 5-number summary, variance and standard deviation for bone mineral density of all mice.

11. Draw the histogram of bone mineral density.

12. On the basis of weight change, do you have any potential outliers? If so, provide ID of suspicious mice. Perform analysis using Iglewich-Hoaglin method.