

Graph plotting workshop I.

1. Import data (03_xy.csv) into R
2. Create histograms of both x and y – combine them into a single two-panel plot, save in pdf or svg format, delete the histogram title
- 3 Adjust margins of the plots to improve the fill of the graphical layout and fix the ranges of y-axes to the same values.
4. Create scatterplot of $y \sim x$
5. Change the point symbols to filled circles, change the colors of the points to illustrate the type variable *Have a look at <http://dr-k-lo.blogspot.cz/2013/11/in-in-r-underused-in-operator.html> to see how %in% operator works.*

Graph plotting workshop II.

6. Add color-key legend to the plot
7. Adjust point size
8. Change the orientation of y-axis values, adjust size of the axis titles and axis values
9. log-scale y- and both axes
10. Add text "Colorful points" somewhere inside the plot region and onto the plot margins
11. Add text $r^2 =$ value of squared correlation coefficient somewhere into the plot region

12. Create boxplot of $y \sim$ type
13. Create barplot of mean y classified by type, add error bars indicating standard errors
14. Create dotchart of mean y classified by type, add error bars indicating standard errors

15. Generate new data frame by:

```
big.data<-data.frame(y=rlnorm(30000, 4, 0.5)+sample(c(1,50, 8, 100, 9, -11, 20, 40, -20), 30000, replace=T), fact=c(rep("a", 12000), rep("b", 18000)))
```

16. Create a boxplot of $y \sim$ fact
17. Create a beanplot of $y \sim$ fact

Homework (to be completed after the second graph plotting workshop): Create a graphically nice plot with nice axis labels and minimum two panels – embed in into a word document with the code used to generate the figure pastet below. Convert the word file to pdf named *surname.pdf* and upload to Homework Vaults in IS. You can use your own real data or generate some imaginary data for this task.