Homework Assignment 12  
(Due Wednesday, May 15, 2019)

This homework is provided as an exercise only, and will not be graded. I will post the solutions May 15, 2019.

1. A classical N, P, K (nitrogen, phosphate, potassium) factorial experiment on the growth of peas, with replicates. The data are available [here](#). Analyze the data, which includes the consideration of all higher order interactions, and state your findings.

2. This is a problems from Peter Dalgaard's book. You have to install the R package ISwR written by Peter Dalgaard. The easiest way to do this is to open an R session and type `install.packages("ISwR")` at the prompt. To load the package into your workspace, type `library(ISwR)`. The data set `malaria` and will be available in your workspace. Simply type `malaria` at the R prompt. In this malaria data set, analyze the risk of malaria with age and log10-transformed antibody level as explanatory variables. State your conclusions, and give an interpretation of the model parameter(s) besides the intercept.

3. For two species of heme, we record the optical density (od) as a function of the H$_2$O$_2$ concentration (conc). The data for this problem are available [here](#).

   (a) Plot the data.
   (b) For each species of heme, fit the model $E[od|conc] = b \times \exp(-c \times conc)$.
   (c) Add the curves to the plot.
   (d) Test if the lines are identical.