For this assignment there is no computer work. It includes only exercises from the book, with some slight modifications and additions.

1. Do Exercise 6.4, page 311. (Notice that the instructions are given at the top of the page, before Exercise 6.1, and that there are parts a to d.) Now add a part e by explaining whether or not the results as described indicate that there is an interaction between the two factors in their effect on the response.

2. Do Exercise 6.6, page 312. (Same instructions as for 6.4.) Now add a part e by explaining whether or not the results as described indicate that there is an interaction between the two factors in their effect on the response.


4. Do Exercise 6.19 (page 314), part (a) only. (The “two interaction graphs” requested in the exercise include one with the categories of Factor A on the x-axis and lines for the categories of Factor B, and the other has those roles reversed.)

5. Using the data in Exercise 6.19 give numerical values to estimate all of the parameters in the two-factor ANOVA model $Y_{ikj} = \mu + \alpha_k + \beta_j + \gamma_{kj} + \epsilon_{ikj}$ in the order listed below:
   a. $\mu$
   b. The values of $\alpha_k$ for $k = 1, 2$ where $k = 1$ for Treadmill and $k = 2$ for Rowing machine
   c. The values of $\beta_j$ for $j = 1, 2$ where $j = 1$ for Men and $j = 2$ for Women
   d. The values of $\gamma_{kj}$ for all $j, k$ pairs


8. Do Exercise 7.8 (page 383).

9. Do Exercise 7.30 (page 390). (Hint: Exercise 7.31 is very similar, and has answers in the back of the book.)

10. Do Exercise 8.2 (page 435). Note: This last homework exercise brings us full circle, because it involves the basic concepts we discussed on the first day of class!