Homework #3

Due on 11/12/2019 at 8:30am

1. K-stage design
   * 1. What is the goal for Simon’s two-stage design? (10%)
     2. What is the null and alternative hypothesis for Simon’s two-stage design? (10%)
     3. How do you determine the sample size for Simon’s two-stage design? (10%)
     4. What is the difference between minmax and optimal design for Simon’s two-stage procedure? (10%)
     5. What are the draw backs for Simon’s two-stage design? (10%)
     6. How can you overcome the drawbacks? (10%)
2. Write the statistical section of a protocol for a non-superiority trial comparing a testing drug to an placebo control using a continuous outcome.

Be sure you specify:

1. The type I and Type II errors
2. The superior threshold Δ
3. The rationale for your choice of 1 and 2
4. The test statistic you will be using
5. The sample size for the trial given the information above
6. The interpretation of your findings (i.e., what do you conclude if you reject/not reject the null hypothesis)