

Homework Solutions

Chapter 1 – Page 67

Exercise 31

- (a) This problem is slightly different from the others. The null hypothesis shows no bias in either direction. However, the alternative hypothesis favors the lower values. Therefore, the direction of extreme is to the left (towards the lower values) because this is the direction in which we are more inclined to abandon the null hypothesis in favor of the alternative hypothesis. (This conclusion is confirmed in part (b) where they describe the decision rule.)
- (b) Using Die A, i.e., H_0 , we find that $\alpha = 1/6$. Using Die B, i.e., H_1 , we find that $\beta = 7/10$. (Add up all but the first fraction).
- (c) Use Die A to find the p -value. It is $2/6$. Her decision is to accept H_0 because the value was not 1 or less.