STATISTICS (BF) 2023/24
Lab Practicals 8

1. A company markets an eight week long weight loss program and claims that at the end of the program on average a participant will have lost 5 pounds. On the other hand, you have studied the program and you believe that their program is scientifically unsound and shouldnât work at all. With some limited funding at hand, you want test the hypothesis that the weight loss program does not help people lose weight. Your plan is to get a random sample of people and put them on the program. You will measure their weight at the beginning of the program and then measure their weight again at the end of the program. Based on some previous research, you believe that the standard deviation of the weight difference over eight weeks will be 5 pounds. You now want to know how many people you should enroll in the program to test your hypothesis.

2. Let say you take $n = 10$ and get the following sample.

Before	125	131	126	117	114	134	123	135	100	117
After	121	118	119	110	113	118	111	130	94	118

   Are the claims of the company true at significance level 0.05?

3. Compute 4th and 5th exercise from class in R.