Instructions

1. A statement of the broader problem that you are studying,and why it is important, why we should care (what you discussed in HW # 1).

2. A research question: this is the heart of any study. It boils the broader problem down to a single main focus point that can be analyzed with data collected specifically for the question at hand. For example, if the broader problem is how to reduce homelessness, one piece of the puzzle is identifying before and after measures of homelessness that can be statistically tested. The research question might be “Did the expansion of county-sponsored homeless shelters(which cost the taxpayers $1 million last year) reduce the amount of homeless people on our streets?”; or “Are there fewer homeless people on our streets this year?”You would formalize this research question as set of testable hypotheses(null and alternative):H0: The # homeless people this year = the # of homeless people last yearH1: The # homeless people this year ≠the # of homeless people last year

3. Your testing approach: Here, you should describe the data that you need or have,why this data is relevant, and how you will test it.To test the hypotheses, you should first collect or identify relevant sample data to analyze. For example, you could get data from the county’s administrators, or talk to homeless shelters, or you could drive around every weekend for a month in one year and count the homeless people observed, and then do the same in the same month the following year.Also, you should describe the appropriate statistical test that you will use (1-or 2-sample t-test, regression, ANOVA, etc.). Explain your data needs, data sources, and the analysis tool(s)your use to test the hypotheses.