

MathStat474 - HW 1

Posted: Mon Aug 18. **Due: Wed 8/28.**

Before we begin...

A note on catching up with the studying: since this is our first homework set, and we are just getting started, there are only two tasks for you to do (both are listed under “problem 1”). It is my hope you can use this to really think about the following concepts: research questions, population, sample, data, data collection mechanisms, types of data, and begin to think about how data are usually summarized graphically. Generally, this semester, you can expect homework due on week N to relate to the material covered in week N-1 – that is, I am not likely to teach a brand new concept on a Monday and ask you to submit homework on it on Wednesday. But, it is true that sometimes we will be *finishing* up last week’s discussion on Monday and yes, that topic can be on the homework that Wednesday.

Problem 1 - Statistics in the Media

This question asks you to find *examples* of statistics in the *media*. You are asked to describe two specific examples, with sources describing at least one variable of interest to the study. Your examples must come from two different articles or news stories. You may use print media or online media to find the two examples of statistics, but you **must give a reference** for each. Use section headers or titles to separate each of your two descriptions.

Write a well-crafted paragraph or two summarizing how the article describes information about a variable. As you write, please incorporate answers to all the following questions:

- What is the study about? What is the *specific* research question that is prompting data collection?
- On how many variables was the data collected?
 - Is/are the variable(s) categorical or quantitative? What are they measuring?
- Do the data represent a sample or a population?
 - If the data are a sample, to what population might we generalize?
 - What is the size of the sample collected?
- Are any specific summary statistics given, such as a proportion or a mean? If so, what are they?
- Is any visual display or graph included in the article? If so, what?
- Does the article discuss the method of sampling? If so, describe it.
- Would you have any reason to suspect that the method of sampling introduced any bias? Explain.

Typing up work

If you want to type up your homework, please don’t use Microsoft Word or the like. You can get great formatted documents in Markdown! Check out the links below.

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