(1) Rarely, the data we gather measures the entire population we care about so we have the parameters directly and don't need to use "statistics" to predict them (e.g., many sports statistics). As discussed in class, in practice we usually take data from a sample, calculate "statistics" and then use them to make inferences about the population's "parameters. Understanding the differences between samples and populations, statistics and parameters, is important to understanding the conceptual process of using statistics. Go to the website:


and take a look at the different patterns of Netflix movie rentals. Assume for the purposes of this question that the authors used all the data that Netflix has (or could potentially have) to make the graphical tool on the website.

(a, 3 pts) Describe a scenario in which this data or subset of this data represents the statistics of a sample from which we would infer population parameters. Clearly describe why this data is a sample and which population it may be useful for studying.

If we are interested in what movies everybody is watching, this data is a sample because it shows only what Netflix customers are watching; it does not include information about Redbox or other online usage for example. We could try to use this sample data to take a good guess at what everybody is watching (the population we care about), but we would want to be careful that the sample is representative of the overall population (I.E., isn't biased somehow).

(b, 3 pts) Describe a scenario in which this data or subset of this data represents the parameters of a population. Clearly describe the population it represents and why this data is not a sample in your scenario.

For each region this data represents the rentals of an entire population of Netflix customers in the time period indicated. If we were Netflix, it may well be that all we care about is these renters (what they rent determines inventory demand) and this set of data completely encompasses all the information we care about in the region, a population.

(2) There is a running route that I sometimes take from the intersection of Redondo and 10th St. East to Ximeno Ave and then South to 3rd St. then West to North Obispo and then North to 10th and then finally East again to the starting location. How far is this running route, in miles? Also, briefly describe the technique you use to calculate the distance in your answer.

I get 3.01 when using the distance calculator at http://www.gmap-pedometer.com/ Values from 2.8 to 3.2 miles receive full credit, values from 2.6 to 3.4 miles receive 50% credit, values outside this range receive no credit.

(3, 3 pts ea) Use the following set of tabulated numbers to calculate the values represented by the summation notation (a)-(c) and to provide the summation notation asked for in question (d)

| 2  | 2  | 6  | 6  | 6  | 6  | 8  |
| 8  | 4  | 1  | 3  | 7  | 8  | 2  |
| 6  | 4  | 3  | 5  | 5  | 6  | 4  |
| 4  | 2  | 5  | 3  | 7  | 6  | 6  |
| 8  | 8  | 7  | 5  | 3  | 8  | 6  |
| 2  | 4  | 6  | 6  | 4  | 6  | 8  |
| 4  | 6  | 8  | 8  | 4  | 6  | 4  |

(a) \[\sum_{i=1}^{5} x_{5,i} = \_31\_\]

(b) \[\sum_{i=1}^{5} x_{i,2} = \_20\_\]

(c) \[\sum_{i=3}^{5} \sum_{j=2}^{5} x_{i,j} = \_57\_\]

(d) In the box at the right, provide the summation notation for the operations required to sum the odd numbers in the set above.
(4, 3 pts) Answer the questions that follow using a form 882-E scantron. Do not submit this page of questions; you will submit the first page of this assignment with the completed scantron form. Do not staple this form; there will be two separate collection boxes. The grading for this question will be based upon the presence/absence of a completed scantron form; the answers given will be treated confidentially.

I prefer to do things with others rather than on my own. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I prefer to do things the same way over and over again. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
If I try to imagine something, I find it very easy to create a picture in my mind. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I frequently get so strongly absorbed in one thing that I lose sight of other things. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I often notice small sounds when others do not. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I usually notice car number plates or similar strings of information. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
Other people frequently tell me that what I've said is impolite, even though I think it is polite. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
When I'm reading a story, I can easily imagine what the characters might look like. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I am fascinated by dates. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
In a social group, I can easily keep track of several different people's conversations. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I find social situations easy. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I tend to notice details that others do not. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I would rather go to a library than to a party. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I find making up stories easy. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I find myself drawn more strongly to people than to things. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I tend to have very strong interests, which I get upset about if I can't pursue. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I enjoy social chitchat. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
When I talk, it isn't always easy for others to get a word in edgewise. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I am fascinated by numbers. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
When I'm reading a story, I find it difficult to work out the characters' intentions. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I don't particularly enjoy reading fiction. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I find it hard to make new friends. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I notice patterns in things all the time. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I would rather go to the theater than to a museum. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
It does not upset me if my daily routine is disturbed. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I frequently find that I don't know how to keep a conversation going. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I find it easy to 'read between the lines' when someone is talking to me. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I usually concentrate more on the whole picture, rather than on the small details. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I am not very good at remembering phone numbers. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I don't usually notice small changes in a situation or a person's appearance. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I know how to tell if someone listening to me is getting bored. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I find it easy to do more than one thing at once. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
When I talk on the phone, I'm not sure when it's my turn to speak. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I enjoy doing things spontaneously. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I am often the last to understand the point of a joke. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I find it easy to work out what someone is thinking or feeling just by looking at their face. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
If there is an interruption, I can switch back to what I was doing very quickly. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I am good at social chitchat. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
People often tell me that I keep going on and on about the same thing. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
When I was young, I used to enjoy playing games involving pretending with other children. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I like to collect information about categories of things (e.g., types of cars, birds, trains, plants). (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I find it difficult to imagine what it would be like to be someone else. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I like to carefully plan any activities I participate in. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I enjoy social occasions. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I find it difficult to work out people's intentions. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
New situations make me anxious. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I enjoy meeting new people. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I am a good diplomat. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I am not very good at remembering people's date of birth. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree
I find it very easy to play games with children that involve pretending. (A) Definitely agree (B) Slightly agree (C) Slightly disagree (D) Definitely disagree