First name: Show detailed work as no		Final Exam Stat243		Date:
theorize that the mear persons. The sample s 62.24, and 16.34 for	n time on the Trial Makin sizes, sample means, and normal persons respective	unction for a set of patient ing Test for patients will be I sample standard deviation yely. (a) define the paramet archer's theory and state you	larger than the corresponds are 41, 104.23, and 45.43 ter of interest to researches	ling mean for normal 5 for patients and 49, rs. (b) Setup the null
				·····
` • /		ations is selected from a pognition of \overline{x} . (c) Find		. ,
average number of whole number of wheels on	heels on each of the 28 r all social robots built wi	obtained through web searce obots is 3.32 and the standa th wheels with 99% confidentially constructed confiden	ard deviation is 1.4. (a) estence. (b) Interpret the inter	timate μ , the average rval in part (a). (c) In

4. (9 pts) At a research Lab, 10 adult female carb spiders were collected and each spider was set on a yellow central part of a daisy. The amount of chromatic contrast between the spider and the flower was mastered. The researchers discovered a contrast of 70 or more allowed birds to see the spider. Of interest is whether the true mean of chromatic contrast of each carb spider on daisies is less than 70. The sample's computed mean is 57.5 and standard deviation is 32.6. (a) Define the parameter of interest. (b) Set up the null and alternative hypotheses of interest. (c) give the rejection region for α = .10 (d) State the appropriate conclusion.
5. (2 pts) Can two different datasets have the same standard deviation but different averages? Yes or No, Explain
6. (2 pts) What are the conditions that must be satisfied before you can approximate discrete with continuous probability?
7. (2 pts) State the basic premise of the central limit theorem.
8. (2 pts) What're the limits for probability of an event?
9. (2 pts) What are the properties of the sampling distribution of \overline{x} ?
10. (2 pts) What does it mean for a dataset to have standard deviation equal zero? Give an example.
11. (2 pts) What does it mean for a dataset to have an IQR=0?
12. (2 pts) What's the difference between the areas at the mean of a continuous and discrete probability distributions?
13. (2 pts) What's the general definition of statistics?