Intro to Stats: Day 1 Homework **Name:** _____

You may write your answers and explanations right on this page.

1. For each of the following sets of data, indicate which type of data it is (nominal, ordinal, interval, ratio), and also if the data is discrete or continuous.

	Data	Type of Data	Disc or Cont?
a)	The heights of students at ENC (measured in inches, but not rounded off)		
b)	The Fahrenheit temperature of the water in Quincy Bay.		
c)	The roster of player numbers on ENC's softball team.		
d)	The number of people in Intro to Stats.		
e)	On a scale of 1 to 10 (whole numbers only), the rating of the food in the cafeteria.		

2. Suppose I am interested in the average price of textbooks at ENC's bookstore. I randomly choose 35 textbooks, calculate the average of those, and report my findings to the campus newspaper. For this example, identify the following:

a) The population of interest

b) The parameter of interest

c) The sample involved

d) The statistic involved

Follow-up question: With our "whole point of statistical inference" in mind, what is it we are trying to learn on this example?

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3. Determine if the following numerical characteristics are parameters or statistics. (They must be one or the other, but not both, and not neither.)

a) The average height of this semester's Intro to Stats students (population is all ENC students)

b) The percentage of Business majors at ENC (population is all ENC students)

c) The percentage of Business majors at ENC (population is all college students)

d) The true proportion of heads that my "lucky quarter" gives.

e) The proportion of heads that my "lucky quarter" has given over the last 100 tosses.

4. I've been trying to get a sense of how students feel about mandatory chapel. So I sent out an email to all students, asking them to reply with a "Yes" if they want to keep mandatory chapel, and a "No" if they want to eliminate mandatory chapel. I received 30 "Yes" emails and 60 "No" emails. From that I concluded that only 1/3 of ENC students want to keep mandatory chapel. This proportion of 1/3 would be a statistic, since it only came from a sample, not the entire population. Would we expect this statistic to reasonably reflect the true proportion (parameter) of all students who think we should keep mandatory chapel? Briefly explain why or why not.
(Hint: The answer to this should be apparent after you complete today's reading.)