Math 145 Quiz 1 Name: Row:

1. Statistic or parameter?
   - A sample of Canada geese who mate is observed and the average number of offspring is 3.8.
   - In a study of all cloned sheep it is found that their average age is 2.7 years.
2. Discrete or continuous?
   - Length of broad-billed hummingbirds.
   - Number of manatees killed by boats each year.
3. Which interval of measurement? Nominal, ordinal, interval, or ratio?
   - Ratings of excellent, good, average, or poor for the racing ability of thoroughbred horses.
   - Systolic blood pressure.
   - Years in which snowfall was below 20 inches.
4. What kind of sampling? (random, systematic, convenience, stratified, cluster)
   - A dietitian has partitioned people into age categories of under 18, 18-49, 50-69, and over 69. She is surveying 200 in each category.
   - A farmer has 5267 orange trees. She randomly selects 20 trees, then picks all of the oranges on those trees and measures the sugar content in each orange.
5. The weights (in kg) of a sample of orangutans are: 75.3, 75.6, 77.8 81.3, 82.5, 82.6, 84.3, 85.0, 85.4, 87.5, 88.0, 88.3, 89.5, 90.1, 90.6, 92.3.
   (a) Make a frequency distribrution table (percents) using 6 classes (as shown in class).

   (b) What is the sample mean weight (Calculator OK, give units)?
   (c) What is the sample variance (Calculator OK, give units)?
6. Heights of men have a bell-shaped distribution with a mean of 176 cm and standard deviation 7 cm. Think about the empirical rule ...
   (a) Out of 1000 men, about how many would you expect to be between 162 cm and 190 cm?

   (b) Out of 1000 men, about how many would you expect to be above 190 cm?

7. The teacher says that average on a test is 70 and the standard deviation is 10, furthermore more than 30% of the class got "A's" by scoring 91 or higher. Is there a math problem here? Explain.