All questions are worth 1 point.

(1) For the following questions, consider a data set that exhibits a normal distribution. Report the answers to the nearest 0.01%.

(a) How much of the data lies below the value corresponding to Z = 1.1?
   ________%

(b) How much of the data lies between the values corresponding to Z = 1.1 and Z = 1.3?
   ________%

(c) How much of the data lies between the values corresponding to Z = -1.1 and Z = 1.3?
   ________%

(2) For the following questions, consider a data set that exhibits a normal distribution. Report the answers to the nearest 0.01.

(a) What is the Z score for the value that is larger than 20.9% of the data?
   Z = _______

(b) What is the Z score for the value that is smaller than 11.9% of the data?
   Z = _______

(c) Consider a portion of the data bounded above and below by certain Z scores. If we consider a region bounded below by Z = 0.4, what is the Z score of the upper bound if the region contains 23.9% of the data?
   Z = _______

(3) Consider a set of 900 normally distributed data values with a mean of 24 and a standard deviation of 4.0

(a) How many values are larger than 27.00?
   # = _______

(b) How many values are between 23.00 and 28.00?
   # = _______

(c) What is your best estimate for the value of Q3?
   Q3 = _______

(4) Imagine that we take a sample from a population of interest. Assume that this sample accurately reflects the mean and standard deviation of the population so you can use the normal distribution and Z scores for the problems below. (If you've read ahead in your book or lab manual you know we should really use t scores, don't worry about this right now, use the Z scores)

(a) Assuming that the population data is normally distributed, what is the value that you expect 67% of the data in the population to be smaller than?
   (round to nearest 0.01)
   Val. = _______

(b) What is your best estimate for the IQR of the population data?
   (round to nearest 0.01)
   IQR = _______