

BIOS 600 · Quiz 4.3: Probability Distributions & CLT

Fall 2011

1. **Honor Pledge:** I have neither given nor received unauthorized aid on this assignment.
(Sign and print your name.)

2. Assume that systolic blood pressure for a 5-year-old boy is normally distributed with a mean of 94 mmHg and a standard deviation of 11 mmHg. What is the probability of a 5-year-old boy having a blood pressure less than 105 mmHg? (You don't have to find the probability. Find the z-score.)

3. Identify the distribution and parameters in the following examples. (You do not need to find the population mean and variance. You need to identify the pmf or pdf parameters.)

Distribution (Put N for Normal, P for Poisson, B for Binomial)	Parameters	Example
		Suppose 25% of a population are recessive carriers of a disease. Let X equal the number of students that are recessive carriers in a class of 25 students.
		Suppose a pedestrian injury (from motor vehicle collision) occurs at a particular crosswalk twice a year. Let Y equal the number of pedestrian injuries at the crosswalk each year.
		A local fast food chain is offers a promotion where "1 in 4 orders win". Let Z be the number of wins in 20 orders.
		Let W be the weight of a full term male infant. The average weight is 3800 grams, and the standard deviation is 448.