

Unit 7 – Normal Distribution
Self Evaluation Quiz

1. Suppose that the distribution of diastolic blood pressure in a population of hypertensive women is modeled well by a normal probability distribution with mean 100 mm Hg and standard deviation 14 mm Hg. Let X be the random variable representing this distribution. Find two symmetric values “a” and “b” such that

$$\text{Probability } [a < X < b] = .99$$

2. Suppose that the distribution of weights of New Zealand hamsters is distributed normal with mean 63.5 g and standard deviation 12.2 g. If there are 1000 weights in this population, how many of them are 78 g or greater?
3. Consider again the normal probability distribution of problem #2. What is the probability of selecting at random a sample of 10 hamsters that has a mean greater than 65 g?