**Prep for Quiz #2**

1) The distribution of weekly incomes of supervisors at the ABC Company follows the normal distribution, with a mean of $1000 and a standard deviation of $100. What percent of the supervisors have a weekly income between $840 and $1200?

2) Twenty percent of the employees of ABC Company use direct deposit and have their wages sent directly to the bank. Assume we random sample five employees. What is the probability that all five employees use direct deposit?

3) Three work shifts producing the same product sorted the finished product into 4 categories based on its quality level and displayed the results in the following table. Determine whether there is dependence between the shift and the quality of the product? (Does product quality depend on the shift that produces it?) Assume alpha= 0.05

**1st Shift 2nd Shift 3rd Shift**

**Perfect product** 185 175 170

**Acceptable product** 55 60 65

**Defective product** 15 15 15

**Reworked product** 10 15 15

4) A bullet manufacturer claims to have produced a projectile having a mean muzzle velocity of more than 3000 feet per second. From a random sample of 60 bullets he calculates a sample mean of 3012 feet per second and a sample standard deviation of 112 feet per second. Does the data from the sample support his claim?