

MA 222. Assignment 3

due Monday Jun. 13, 2011 at the beginning of the class.

For this assignment please solve the following problems. The problems listed with page numbers are from the ninth edition. You can either use that textbook or the handout given in class:

Page	Exercise
93	3.21
94	3.31
139,140	4.82
187	6.19
187	6.22
193	6.34
208,209	6.78

In addition, please do the following problem:

- A. In a pickle factory, the weight of the pickles in the jar before brine is added is a random variable uniformly distributed between 26 and 30 oz. Once the brine is added the jar will weigh 32 oz. A jar of pickles which contains less than 26.5 oz. of pickles is considered defective.
- (a) Calculate the probability that one jar contains less than 26.5 oz. of pickles.
 - (b) If we take ten jars off the assembly line, calculate the probability that exactly 7 of them will contain less than 26.5 oz. of pickles
 - (c) What is the probability that none of the ten chosen will have less than 25 oz. of pickles?

- (d) If we look at each jar individually as it comes off the assembly line, what is the probability we need to look at exactly 5 jars before we see the first one with less than 26.5 oz. of pickles in it?