

MA 222. Assignment 6

due Wednesday Feb. 27, 2008 at the beginning of the class.

For this assignment please solve the following problems:

NEW edition		OLD edition	
Page	Exercise	Page	Exercise
114	50	127	?
114	51	127	?
114	54	127	50
120	69	133	65 (BONUS)

The first two problems cannot be found in the older edition (though 48/page 126 is practically identical), so I will write them here.

(50/114) A particular telephone number is used to receive both voice calls and fax messages. Suppose that 25% of the incoming calls involve fax messages, and consider a sample of 25 incoming calls. What is the probability that:

- At most 6 of the calls involve a fax message?
- Exactly 6 of the calls involve a fax message?
- At least 6 of the calls involve a fax message?
- More than 6 of the calls involve a fax message?

(51/114) Refer to the previous exercise.

- What is the expected number of calls among the 25 that involve a fax message?

- b.** What is the standard deviation of the number among the 25 calls that involve a fax message?
- c.** What is the probability that the number of calls among the 25 that involve a fax transmission exceeds the expected number by more than 2 standard deviations?