Problem Set 6

Textbook: *Probability and random processes* by Geoffrey Grimmett and David Stirzaker

Section	Problem Numbers
1.2	4,5
1.3	3,5,6,7

Source: *ECE 313 UIUC course lecture notes*

Section	Problem Numbers
1.6	1.2, 1.4
1.7	1.1,1.8, 1.9

Some more problems:

1) Ten people are randomly seated at a round table. What is the probability that a particular couple will sit next to each other?
2) What is the probability that among 25 people, at least two have their birthday on the same day of the year? (Hint: Forget leap years and calculate the probability of the complementary event)
3) Let F be a sigma-field and A_i, i=1,2,... are events in F. Let A denote the countably infinite intersection of the events A_i. Show that
    a) A is in F.
    b) IF P(A_i) = 1 for each i, then P(A)=1