Problem Set 8

Practice questions in Grimaldi:

4.2 - Q 1-9
5.1 - Q 1-5, 7

More difficult Questions:

1. Let P(m,n) denote the product of the integer m and the non-negative integer n.
    a. Give the recursive definition for P(m,n). Include the function domain and codomain
    b. Give a recursive algorithm to calculate P(m,n)

2. Write a recursive algorithm to find n! (n factorial).

3. Show using mathematical induction that $f_1 + f_3 + ... + f_{2n-1} = f_{2n}$ where f_n is the nth fibonacci number and n is a positive integer.