CS 483
Homework 4
due: July 14, 2015

1. Find, using dynamic programming, a solution to the Integer Subset-Sum Problem (as described in class) where the total weight is $W = 8$ and the weights from which to choose are $w_1 = 2$, $w_2 = 4$, $w_3 = 5$ and $w_4 = 7$.

2. In finding the minimum number of multiplications needed to do matrix-chain multiplication for the multiplication $A_1 \times A_2 \times A_3 \times A_4$ where A_1 is a 2×3 matrix, A_2 is a 3×2 matrix, A_3 is a 2×4 matrix, and A_4 is a 4×2 matrix, part of the matrix $M = (m_{ij})$ has been computed below. Compute the matix entries m_{13}, m_{14} and m_{24} (you need not compute m_{14}) and show your work.

$$\begin{bmatrix} 0 & 12 & m_{13} & m_{14} \\ & 0 & 24 & m_{24} \\ & & 0 & 16 \\ & & & 0 \end{bmatrix}$$