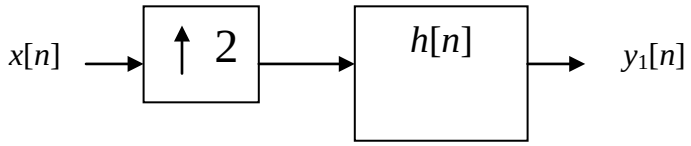
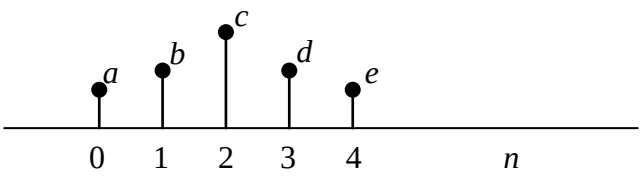
EE577
Homework #2
Due Monday 21 March 2011

Problem 1:
From the textbook **11.11**

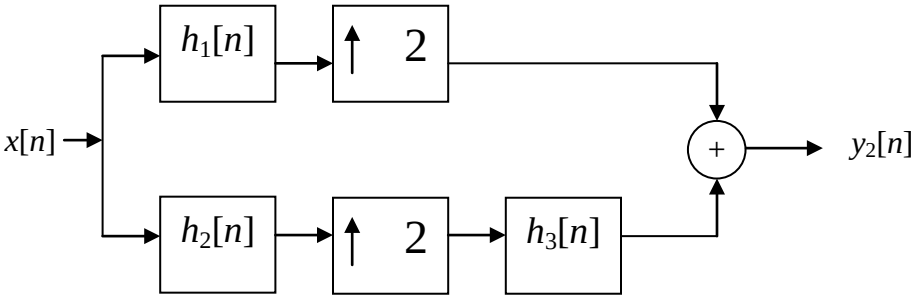
Problem 2:
In a particular implementation, we want to perform the following:



where $h[n]$ is a 5-point FIR filter defined by:



Consider implementing the upsampling system with the efficient polyphase implementation:



If the three unit sample responses $h_1[n]$, $h_2[n]$, and $h_3[n]$ are all restricted to be zero outside the range $0 \le n \le 2$, <u>determine and explain</u> your choices for $h_1[n]$, $h_2[n]$, and $h_3[n]$ so that $y_2[n]$ is identical to $y_1[n]$