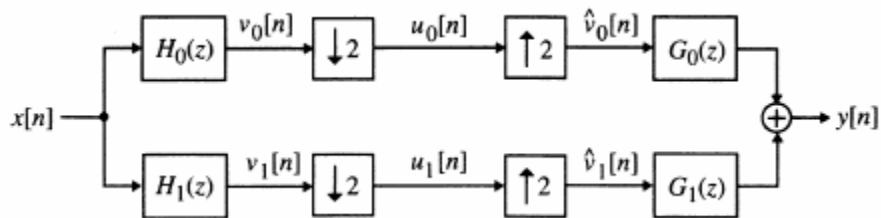


Homework Assignment #6

- Problem 13.4 in the text.
- For the two-channel QMF filter bank below,
 - If the analysis filters are $H_0(z) = 3 + 4z^{-1}$ and $H_1(z) = 1 + 2z^{-1}$, find the synthesis filters that achieve perfect reconstruction.
 - Show that your filters from (a) satisfy the perfect reconstruction and aliasing cancellation properties.



- If $H_0(z)$ and $H_1(z)$ are as given in Problem 2 (a),
 - Find the transfer function from the input to the output for each branch in the filter bank below.
 - What are the advantages and disadvantages of the given filter bank structure?

