EECS 206 – Winter 2002

**Homework #11 – Assigned Mar. 29 – Due Friday Apr. 5**

Relevant Lectures: 3/25, 3/27, 3/29
Relevant Reading: Chapter 7 (all of it)
Relevant Items in the DSP First CD: Homework problems 7.1 to 7.47.
Homework Submission Policies: Same as before (see course Web page).

1. Textbook, Problem 7.4, p. 243.

2. Textbook, Problem 7.7, p. 244.

3. Textbook, Problem 7.10 (b), p. 245.

4. Textbook, Problem 7.12 (d),(e), p. 246.

5. Textbook, Problem 7.14, p. 246.

6. Textbook, Problem 7.18 (a),(b),(c),(d), p. 248.

7. Calculate the overall system function from *x* to *y* in the block diagram below:
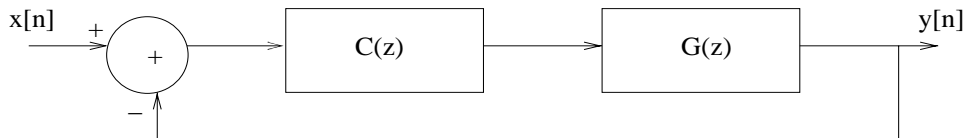
8. Consider the filter
$$y[n] = y[n-1] + y[n-2] + x[n]$$

    (a) Tabulate the values of $h[n]$, $n = 0, \ldots, 10$. Assume that $y[n] = 0$ for $n < 0$.

    (b) Calculate $H(z)$.

    (c) What are the poles and zeros of $H(z)$?