Homework Assignment 1 (Complete)
Due (in class) 9am Wednesday Oct. 5, 2005

Reading:  Signals and Systems Chapters 1—2.
          Computer Explorations, Chapter 1

Problems to Hand In:

Problem 1.  Show that any discrete-time signal $x[n]$ with the property that $x[n + m] = x[n]x[m]$ for all integers $n$ and $m$ is an eigenfunction for any discrete-time LTI system.

Problem 2.  Signals and System, Problems 1.27 a,c,e,g and 1.28 b,d,f.

Problem 3.  Find the DFT of the periodic ($N = 4$) signal with $x[0] = 0$, $x[-1] = -1$, $x[-2] = -2$, $x[-3] = -3$.