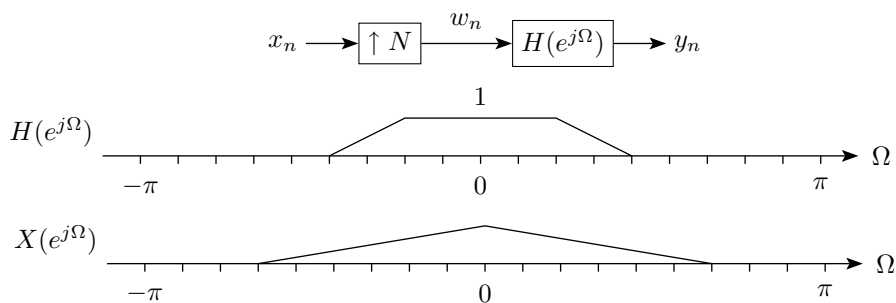


Due: Wednesday, February 15, 2005

Problems

1. Rice Problem 2.3
2. Rice Problem 2.4
3. Rice Problem 2.5
4. Rice Problem 2.6
5. Rice Problem 2.7
6. A system for up sampling is shown below. How much can the signal x_n , with DTFT $X(e^{j\Omega})$ shown below, be up sampled if the low pass filter response $H(e^{j\Omega})$ is the one shown below? Sketch the DTFTs of w_n and y_n .



7. A system for down sampling x_n is shown below. What is the maximum down sampling factor (no aliasing allowed) if the low pass filter response $H(e^{j\Omega})$ is the one shown below? The DTFT of x_n is shown below. Sketch the DTFTs of w_n and y_n .

