

ECE 312 homework #6

Consider the difference equation

$$y[n] + 1.2y[n-1] + 0.7y[n-2] = x[n]$$

1. Find the eigenvalues and express them in polar form.
2. Using MATLAB plot the impulse response for $n=0$ to $n=50$.
3. Using MATLAB plot the unit step response ($x[n]=u[n]$) for $n=-5$ to $n=50$.

In the above assume $y[0] = 1$ and $y[n] = 0$ for all $n < 0$.