PROBLEM:

A linear time-invariant system (FIR Filter) is described by the difference equation: $y[n] = \sum_{k=0}^{3} x[n-k]$

The input to this system is a *finite-length* complex exponential signal:

$$x[n] = e^{j\pi n} \qquad 0 \le n \le 5$$

(a) Make a plot of $x[n]$ vs. n.

(b) Compute $y[n]$, over the a range of n that includes all of its non-zero values.