

## PROBLEM:

A linear time-invariant system is described by the difference equation

$$y[n] = \sum_{k=0}^5 x[n - k]$$

The input to this system is *unit step* signal, denoted by  $u[n]$ :

$$x[n] = u[n] = \begin{cases} 0 & n < 0 \\ 1 & n \geq 0 \end{cases}$$

Compute  $y[n]$ , over the range  $-5 \leq n \leq \infty$ . Make a plot of  $y[n]$  vs.  $n$ .