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. \( n \).