

## PROBLEM:

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

$$y[n] = \sum_{k=0}^4 x[n - k]$$

The input to this system is

$$x[n] = \begin{cases} 0 & n < 0 \\ 2 & 0 \leq n \leq 5 \\ 1 & 6 \leq n \end{cases}$$

Compute  $y[n]$ , over the range  $0 \leq n \leq 8$ .