

## 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 a complex exponential signal:

$$x[n] = je^{j0.4\pi n} \quad -\infty < n < \infty$$

Compute  $y[n]$ , over the range  $-\infty \leq n \leq \infty$ . Simplify as much as possible.