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:

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

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