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:

\( x[n] = j e^{j0.4\pi n} \quad -\infty < n < \infty \)

Compute \( y[n] \), over the range \(-\infty < n < \infty\). Simplify as much as possible.