EE 224 Homework 9

From Textbook:
- 6.7
- 6.8
- 6.11
- 6.13
- 6.16

Problems:
1. Consider the function: \( x[n] = A \cos(0.8\pi n) \)
   a. Verify that the period of the discrete-time signal is \( N_0=5 \).
   b. Calculate the DTFS of this signal.
   c. Plot the coefficients of the DTFS in the frequency domain. Use separate plots for phase and magnitude.
   d. Show that the DTFS coefficients are periodic with period 5.

2. Consider the function: \( x[n] = A \sin(\frac{6}{5}\pi n) \)
   a. Verify that the period of the discrete-time signal is \( N_0=5 \).
   b. Calculate the DTFS of this signal.
   c. Plot the coefficients of the DTFS in the frequency domain. Use separate plots for phase and magnitude.