1. Compute the DTFT of the discrete-time signals shown. Express the DTFTs in the simplest possible form and plot the magnitude and phase spectrum of each signal for \(-\pi \leq \Omega \leq \pi\).

   a) 
   b) 

2. Compute the DTFT of the following discrete-time signals and plot the magnitude and phase spectrum of each signal for \(-\pi \leq \Omega \leq \pi\).

   a) \(x[n] = (-0.3)^n u[n]\)
   b) \(x[n] = (-0.3)^n \sin(n) u[n]\)
   c) \(x[n] = n(-0.3)^n u[n]\)
   d) \(x[n] = (-0.3)^n e^{jn/2} u[n]\)

3. Problem 6.5

4. Problem 6.6c – plot resulting \(x[n]\) for \(-5 \leq n \leq 5\).