
Ch 3 Discrete-Time Fourier Transform

- 3.1 Using Program 3.1 determine and plot the real and imaginary parts and the magnitude and phase spectra of the following DTFT for various value of r and θ :

$$G(e^{j\omega}) = \frac{1}{1 - 2r(\cos(\theta)e^{-j\omega} + r^2e^{-j2\omega})}, \quad 0 < r < 1.$$

- 3.2 Using MATLAB, verify the symmetry relation of the DTFT of a complex sequence as listed in Table 3.1.
- 3.3 Using MATLAB, verify the symmetry relation of the DTFT of a real sequence as listed in Table 3.2.