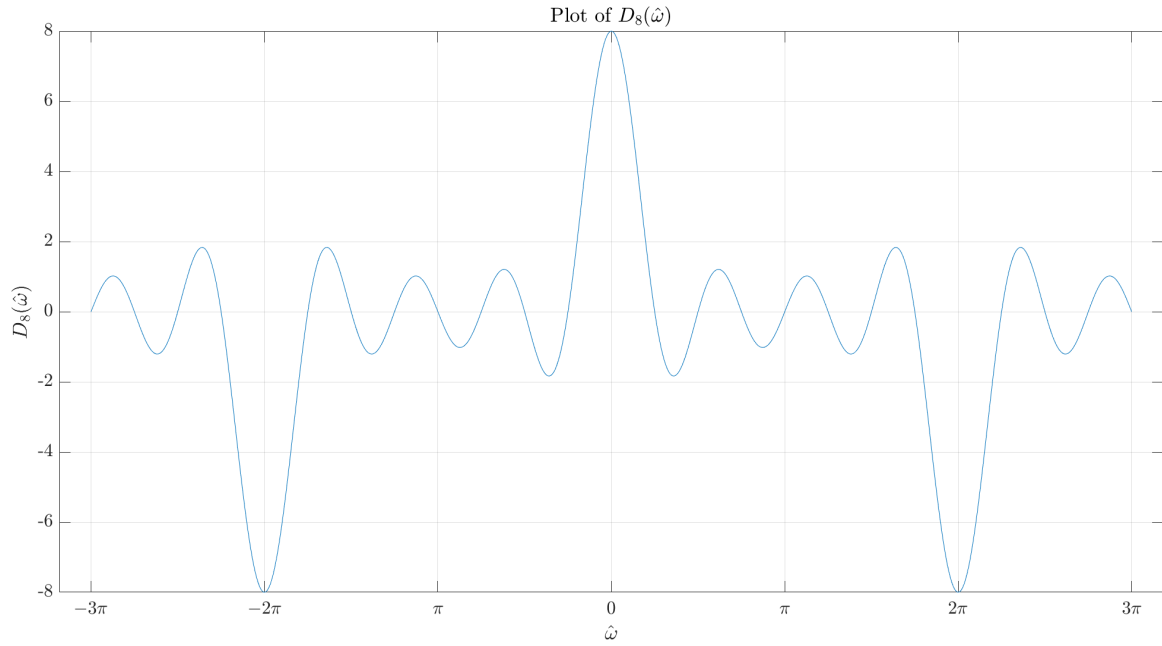## Problem 6.11

(a) Plot of $D_8(\hat{\omega})$ over the range $-3\pi \leq \hat{\omega} \leq 3\pi$:

Zero crossings occur at $2\pi k/L$ radians, $L = 8$ and k is a non-zero integer.

Plot of $D_8(\hat{\omega})$

(b) The period of $D_8(\hat{\omega})$ is 4π radians.

Maximum magnitude of $D_8(\hat{\omega}) = 8$

(c) The period of $H(e^{j\hat{\omega}}) = D_8(\hat{\omega})e^{-j3.5\hat{\omega}}$ is 2π radians.