EXERCISE 7.8: The result given (7.48a) and (7.48b) is easily seen from a graphical solution that shows the rectangular shapes of the DTFTs. With $\hat{\omega}_b = 0.4\pi$ and $\hat{\omega}_{co} = 0.25\pi$, sketch plots of $X(e^{j\hat{\omega}})$ from (7.47) and $H_{LP}(e^{j\hat{\omega}})$ in (7.43) on the same set of axes and then verify the result in (7.48b).

McClellan, Schafer, and Yoder, DSP First, 2e, ISBN 0-13-065562-7.



Prentice Hall, Upper Saddle River, NJ 07458. ©2016 Pearson Education, Inc.