EXERCISE 6.3: Prove that the magnitude is an even function of $\hat{\omega}$ and the phase is an odd function of $\hat{\omega}$ for a conjugate-symmetric frequency response. Start by proving that the magnitude-squared $H(e^{j\hat{\omega}})H^*(e^{j\hat{\omega}})$ is an even function.

McClellan, Schafer, and Yoder, *DSP First*, *2e*, ISBN 0-13-065562-7. Prentice Hall, Upper Saddle River, NJ 07458. ©2016 Pearson Education, Inc.

