ECE 30100 (PHYS 114, TR 4:30-5:45 Section 002)
Fall 2021
Problem Set 5
Due October 15, 2021

"O&W" is Oppenheim and Willsky, Edition 2. Reading for this homework assignment is Chapter 4, pages 284-334.

1. Fourier transform analysis: O&W 4.21 (a, d, f, i).

2. Fourier transform synthesis: O&W 4.22 (b, c, d).

3. Computing Fourier transforms using properties: O&W 4.23 (b, c).

4. Fourier transform properties: O&W 4.24.

5. Convolution in time can be done by multiplication in frequency: O&W 4.26 (a - part ii, b).

6. Fourier transforms and periodic functions: O&W 4.28 (a, b - parts iii and ix).

7. Fourier transforms and LTI systems (convolution property): O&W 4.33 (b)