

EE 301 (MWF 2:30-3:20 Section)
Spring 2013
Problem Set 5
Due February 26, 2013

“O&W” is Oppenheim and Willsky, Edition 2.

1. Fourier series analysis: O&W 3.22 (a - signals in Figures P3.22a and P3.22d).
2. Fourier series synthesis: O&W 3.23 (b, d).
3. An important Fourier series property: O&W 3.46.
4. Fourier transform analysis: O&W 4.21 (a, d, f, i).
5. Fourier transform synthesis: O&W 4.22 (b, c, d).
6. Computing Fourier transforms using properties: O&W 4.23 (b, c).
7. Fourier transform properties: O&W 4.24.
8. Convolution in time can be done by multiplication in frequency: O&W 4.26 (a - part ii, b).
9. Fourier transforms and periodic functions: O&W 4.28 (a, b - parts iii and ix).
10. Fourier transforms and LTI systems (convolution property): O&W 4.33 (b)
11. Fourier transforms and differential equations: O&W 4.34.
12. A communications related design problem: O&W 4.42.
13. Frequency response and impulse response: O&W 4.44.
14. Inverse systems by frequency domain methods: O&W 4.51.

Please help the Smith family raise funds to research a cure for Niemann-Pick Type C disease. Picture shows Julie Smith and two of her children, Keaton and Riley. Go to:

<http://promo.espn.go.com/espn/contests/infiniti/2013/>

Choose Midwest region and select Smith Family BReaK Thru Fund under Matt Painter's name. You have to register with ESPN to vote and can vote once per day.

