

Homework 8
EE 313 Signals and Systems (Fall 2024)
Friday, November 8, 2024

- 1) 5.2 Guidelines/hints: a) Use a frequency range of $-15 < \omega < 15$ rad/s. b) You can use text results, if referenced. c) Since text specifies negative and positive k indices, plot complex exponential Fourier series line spectra.
 - 2) 5.4ab For part b, use Matlab to plot $|H|$ for $-50 < \omega < 50$ rad/s. Find half power bandwidth B_2 and tenth power bandwidth B_{10} .
 - 3) 5.8 For part b, use Matlab to plot $x(t)$ and $y(t)$ for $-0.02 < t < 0.02$ s.
 - 4) 5.13
 - 5) 5.14a Use Matlab to plot $x(t)$ and $y(t)$ for $-11 < t < 11$ s. Have frequency plots range be $-2.5 < \omega < 2.5$ rad/s.
 - 6) 5.24ab **Bonus: Plot $x(t)$ and $y(t)$ for $-10 < t < 10$ s.**
- For problems using MATLAB, include both m-file(s) (put your name in a comment line) as well as output figures (put your name in title) for each problem and/or problem section.

Due Friday, November 15, 2024