

Homework 5
EE 313 Signals and Systems (Fall 2024)
Wednesday, October 16, 2024

- 1) 3.17d Find $X(\omega)$ by direct integration. Using Matlab, plot $x(t)$ for $0 \leq t \leq 4$ s and $|X(\omega)|$ for $0 \leq \omega \leq 50$ rad/s.
 - 2) 3.19b
 - 3) 3.20c Find $X(\omega)$ by direct integration. Plot $|X(\omega)|$ for $-15 \leq \omega \leq 15$ rad/s using Matlab.
 - 4) 3.21c
 - 5) 3.22ab
 - 6) 3.24acfh
 - 7) 3.26c
 - 8) 3.28b Text has a typo, it should read $x(t) = 1 + 2e^{-j2\pi t} + 2e^{j2\pi t}, -\infty < t < \infty$.
- Unless otherwise specified, you may use Fourier transform properties/tables (if referenced).
 - For problems that involve the use of MATLAB, include both m-file(s) (put your name in a comment line) as well as output figures (put your name in title), preferably on same page (e.g., cut-n-paste into MS-Word before printing), for each problem and/or problem section.

Due Monday, October 21, 2024.