All Assignments

Use MATLAB wherever possible to work the problem or check your work on a problem. ***Whenever a requested problem asks you to plot or sketch the answer, you must use MATLAB to do your work***.

Treat the homework like a quiz! In other words, don't do the homework with the notes open. Instead, study and learn the material as well as you can, and then try to work the homework problems. If you get stuck, cover up the homework, re-read the notes, and try again.

If you work homework as a group, you **must** identify the group[*].

Assignment-1

- Reading - Lecture Notes
    - Section #1
- Reference - *Tse, Morse, & Hinkle*
    - Chapter 1 - Introduction
- Homework
    - **1-A)** Express the result of the following complex number expressions in both rectangular ($\text{Re} + j\,\text{Im}$) and polar/exponential ($Ae^{j\theta}$) form. ► Note: write out the evaluation steps; don't simply write the answers. (You may perform the evaluation in either rectangular and/or polar form. Be sure to fully evaluate the resulting expressions.)[†]

        (a) $2 + j\sqrt{5}$

        (b) -3

        (c) $-7 \big/ \left(\sqrt{4} + j\right)$

        (d) $-7j$

        (e) $7 \Big/ \left(\sqrt{2} - 3j\right)^{3}$

        (f) $\left(2 + j\sqrt{3}\right)\left(3 + \sqrt{2}\,j\right)$

        (g) $\left(3 - j\sqrt{5}\right)\left(2 - 7j\right)$

        (h) $\left((5j)^{2} + 11j + 37\right)$

        (i) $\left(\left(3\sqrt{5}\,j\right)^{2} + 7j - 2\right)$

        (j) $\left(3 - j\sqrt{2}\right)^{3}\left(2 + 3j\right)$