

Homework 1

Due: August 28, 2006, in class

Reading: cf. <http://www.nd.edu/~mhaenggi/ee344/overview.html>

A. Problems from textbook: 1.48d,e, 1.49e,i,j, 1.51a, 1.52a,c, 1.53a, 1.54, 1.55a,d.

B. Other Problems:

1. Solve the equation $z^4 = 2$ ($z \in \mathbb{C}$).
2. Simplify the expression $e^{j\pi} + \cos^2 \phi + \sin^2 \phi$.
3. Sketch the curve

$$z(\phi) = 2^{\phi/\pi} e^{j\phi}$$

for $-2\pi \leq \phi \leq 2\pi$ in the complex plane.