정보통신 수학 및 실습
Homework

학번 : 2016110056

학과 : 불교학부

이름 : 박승원

날짜 : 2017년 3월 16일

dongguk
UNIVERSITY

Chapter 3 Homework

1. Simplify the following equations.

a) $\cos(100\pi t)\cos(500\pi t)$

b) $4 sin(200\pi t) cos(300\pi t)$

2. Find the frequency of the following signals.

a) $\sin(t)$

b) $\cos(600\pi t)$

3. Evaluate the following functions.

a) $sin(\pi/4)$

b) $tan(\pi)$

4. Let the information signal $m(t) = 4\sin(200\pi t)$ and the carrier signal $c(t) = \cos(2 \times 10^6 \pi t)$.
   Simplify the transmission signal $x(t) = m(t)c(t)$ and find its frequencies.
   Plot the magnitude of each frequency in the frequency domain.