

## 430.306: Signals and Systems

Electrical and Computer Engineering, Seoul National Univ.

Spring Semester, 2018

Homework #1, Due: In class @ March 29

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Problem 1) Consider the system specified by  $y[n] = \text{Re}(x[n])$ , where  $x[n]$  is a complex-valued input signal. Is this system linear? Why or why not? ( $\text{Re}(x[n])$  is a real part of  $x[n]$ .)

Problem 2) Prob. 1.6 of Oppenheim (p. 57)

Problem 3) Prob. 1.16 of Oppenheim (p. 58)

Problem 4) Prob. 1.17 of Oppenheim (p. 59)

Problem 5) Prob. 1.18 of Oppenheim (p. 59)

Problem 6) Prob. 1.26 (a), (b), (d) of Oppenheim (p. 61)

Problem 7) Prob. 1.30 of Oppenheim (p. 62)

Problem 8) Prob. 1.31 of Oppenheim (p. 62)