ECE 330 homework assignment #4  
(In class quiz – Friday Sept 29, 2017)

Text problem 3.2

Text problem 3.10 a) and b) only  
(answers: 20A, 12 Ohms)

Text problem 3.12

Text problem 3.14

Text problem 3.17

Special problem

A 480/240 V, 4.8 kVA, 60 Hz, single-phase transformer is used to supply a 4.8 kVA load with a 0.8 lagging power factor, at rated voltage (240 V).

a) If the transformer were ideal, what would be the magnitude of the current on the primary (480 V) side? (Answer: 10 Amps)
b) What is the impedance of the load under the ideal assumption?
c) Again, if the transformer is ideal, what would the impedance be as viewed from the primary side? (Answer: 38.4+j28.8 Ohms).