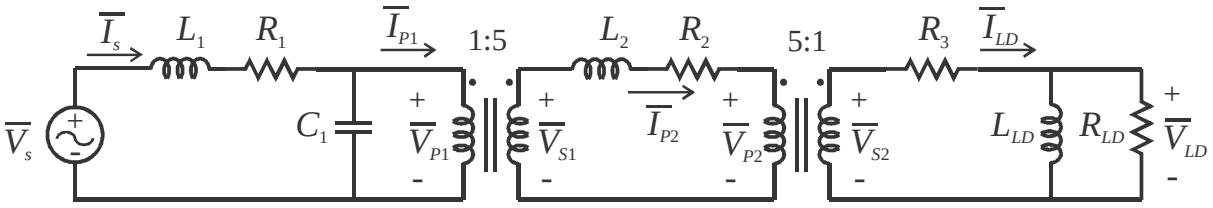
EE 330 Energy Systems (Spring 2012)

Homework 3

♥ Tuesday, February 14, 2012 ♥

1) For the circuit shown, find the indicated currents and voltages (put in RMS phasor format with angle in degrees) given that $\overline{V}_S = 138\angle 0^\circ$ V_{rms}, $C_1 = 0.11$ mF, $L_1 = 0.5$ mH, $L_2 = 1.2$ mH, $L_{LD} = 2.1$ mH, $R_1 = 1\ \Omega$, $R_2 = 3\ \Omega$, $R_3 = 1\ \Omega$, and $R_{LD} = 4\ \Omega$ at 400 Hz. Also, find the complex power provided by the source and complex power delivered to the load. What percent of the real power makes it from the source to the load? Assume ideal transformers.



2) 2-1
3) 2-4
4) 2-6
5) 2-8abc

Due Wednesday, February 22, 2012.