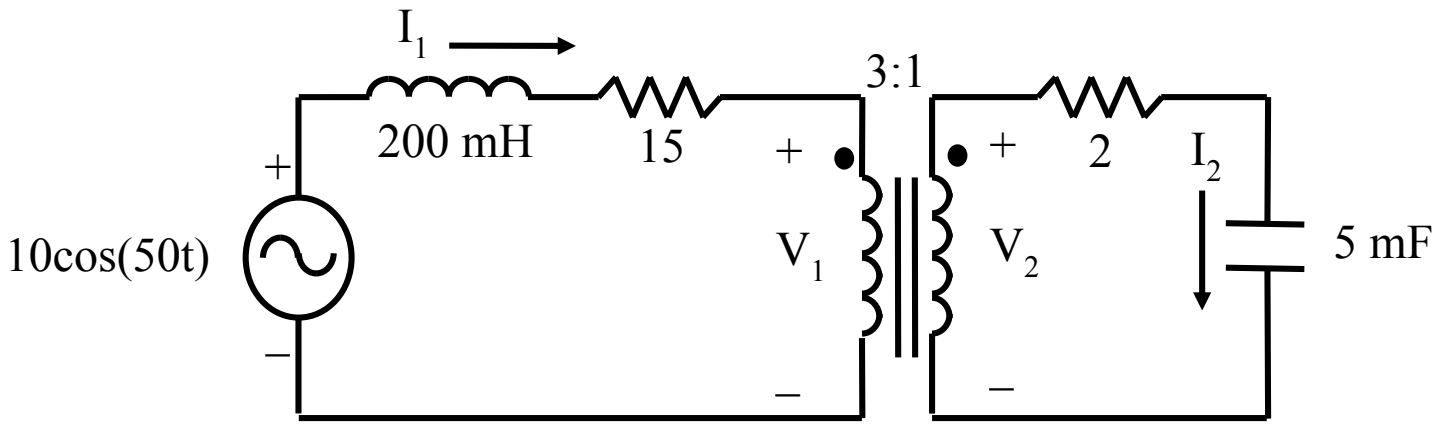
EGR 272 Due Date: Due on the same date as the Ch. 9 Mastering Engineering Homework
Circuit Theory II
File: EGR 272 Ch9 Extra Problems

Extra Problems for Chapter 9

General Note on Extra Problems:
Occasionally Mastering Engineering does not include certain types of problems that the instructor would like to assign. In such cases the instructor may assign additional problems to be submitted by hand. These problems are worth 1 point each, just as in Mastering Engineering (ME), but the point will be added manually at the end of the semester when they are entered into Blackboard.
Example: Suppose that 65 problems are assigned in ME and you earned 59.1 points by the end of the semester. If the instructor also assigned 5 additional problems and you earned 4.2 points, then your final homework average is (59.1 + 4.2)/(65 + 5)*100% = 90.43

Extra Problems for Chapter 9

1) Determine the phasor values (both magnitude and phase) for V_1, V_2, I_1, and I_2 in the circuit below. Find these values by using KVL equations around each loop and the relationship for the turns ratio ($a = V_1/V = I_2/I_1$). Show the phasor circuit and all steps in the solution. Box your final results.



2) Determine the phasor values (both magnitude and phase) for V_1, V_2, I_1, and I_2 in the circuit above. Find these values by reflecting the impedance values from the secondary to the primary. Show the phasor circuit and all steps in the solution. Box your final results.