EE 206: Homework #10

Current Loops, Op-Amps, Superposition with Phasors. Due Monday, April 20th

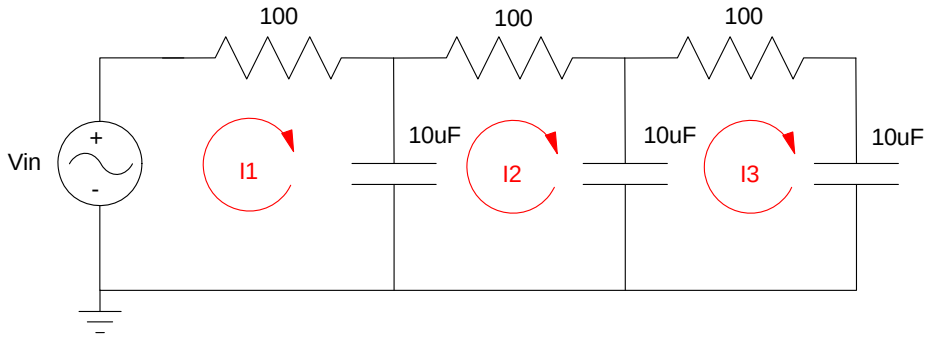
Please make the subject "EE 206 HW#10" if submitting homework electronically to Jacob_Glower@yahoo.com (or on blackboard)

Problem 1) Assume

$$V_{in} = 10\cos(250t)$$

1a) Write the current-loop equations for the following circuit.

1b) Solve for I1, I2, and I3



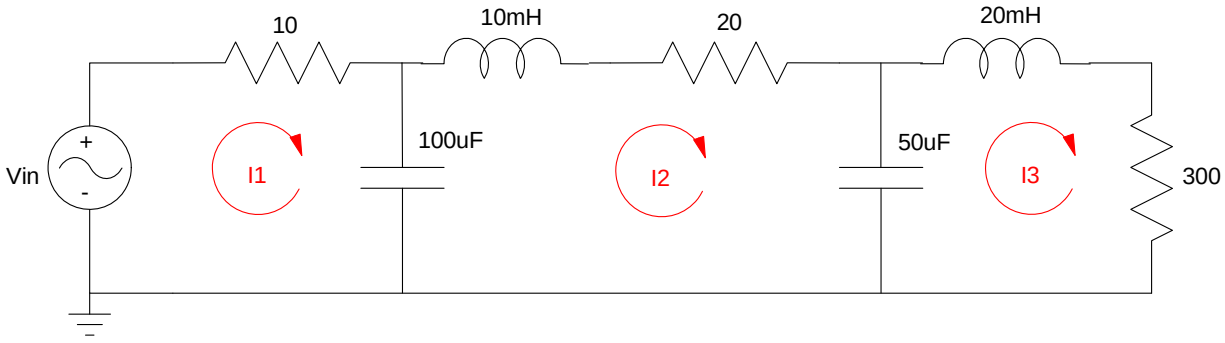
Problem 2) Assume

$$V_{in} = 4\cos(250t) + 5\sin(250t)$$

2a) Write the current loop equations for the following circuit

2b) Solve for I1, I2, and I3

note: The phasor representation for Vin = 4 - j5 (4 cosine +5 sine)



Problem 2

Problem 3) Assume

$$V_{in} = 10\sin(100t)$$

3a) Write the voltage node equations

3b) Solve for V1 .. V4

Problem 4) Assume

$$V_{in} = 12\cos(200t)$$

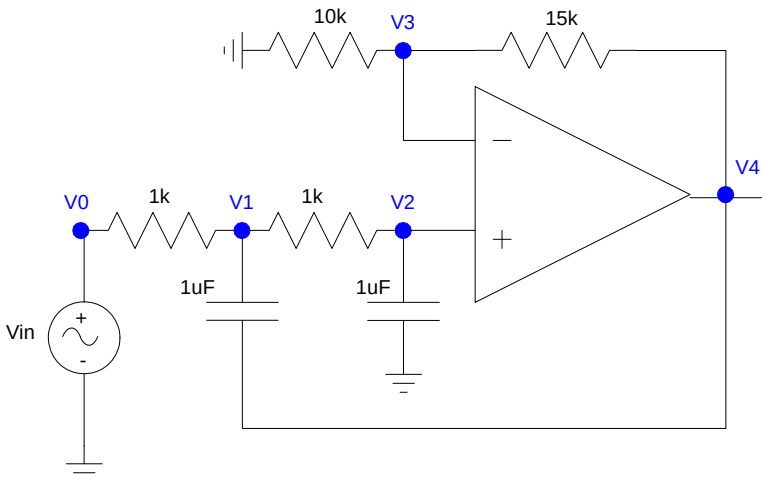
4a) Write the voltage node equations

4b) Solve for V1 .. V4

Problem 5) Assume

$$V_{in} = 10\sin(100t) + 12\cos(200t)$$

Determine V1 .. V4



Problem 3 - 5