

EE 206: Homework #10

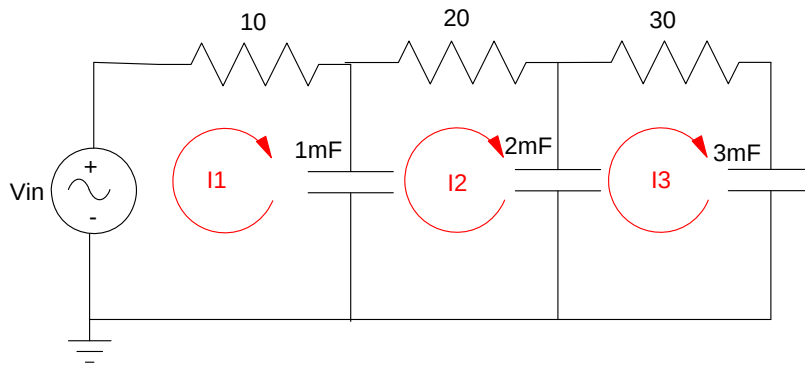
Current Loops, Op-Amps, Superposition with Phasors
Due Monday, April 8th

Problem 1) Assume

$$V_{in} = 10 \cos(20t)$$

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

1b) Solve for I_1 , I_2 , and I_3



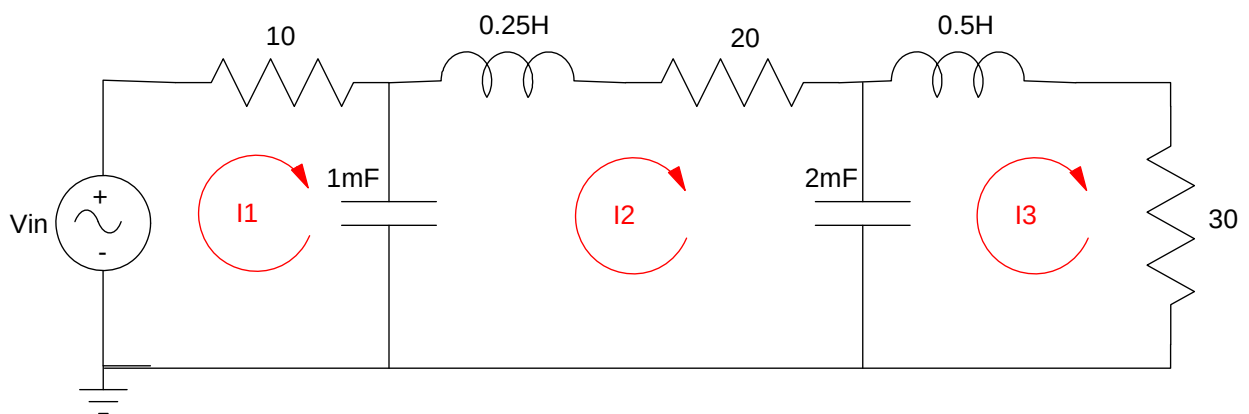
Problem 4

Problem 2) Assume

$$V_{in} = 5 \sin(10t)$$

2a) Write the voltage node equations for the following circuit

2b) Solve for V_1 , V_2 , and V_3



Problem 2

Problem 3) Assume

$$V_{in} = 10 \sin(300t)$$

3a) Write the voltage node equations

3b) Solve for V1 .. V4

Problem 4) Assume

$$V_{in} = 12 \cos(2000t)$$

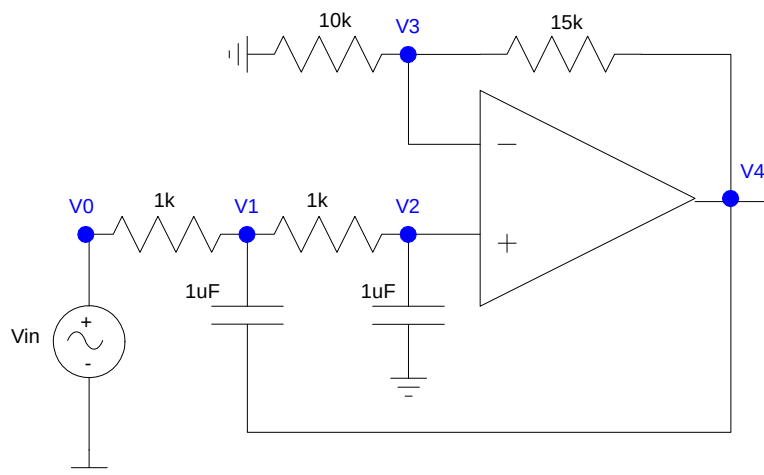
4a) Write the voltage node equations

4b) Solve for V1 .. V4

Problem 5) Assume

$$V_{in} = 10 \sin(300t) + 12 \cos(2000t)$$

Determine V1 .. V4



Problem 3 - 5