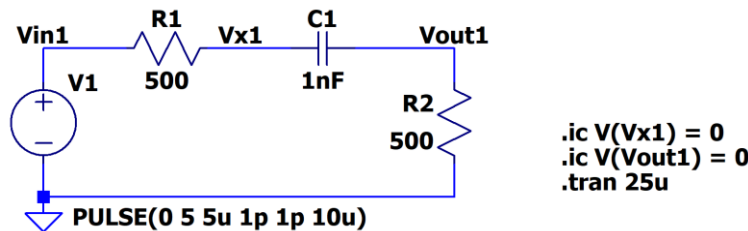


HW14 – Due Wednesday, April 6
EE220 – Circuits I
Spring 2022

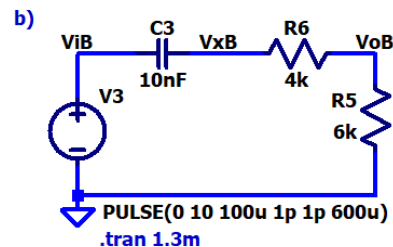
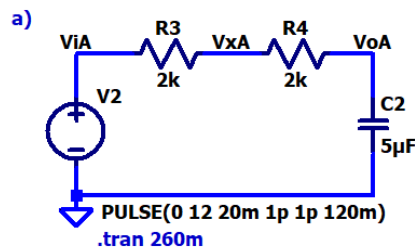
To get full credit:

- Show your work.
- Put a box around each of your answers.
- Make sure to **follow all instructions**.

1. Sketch the waveforms (yes, by hand) for **Vin1**, **Vx1**, and **Vout1** in the following circuit. Verify that your waveforms are correct using LTspice. (6 points)



2. Discuss the operation of the circuit from problem 1 **in your own words**. In your brief, written discussion, mention each of the three labeled voltages specifically and explain their behavior (things like why they are rising/falling at certain times, etc.) (4 points)
3. Sketch the waveforms (yes, by hand) for **all the voltages labeled** in the following circuits. Verify that your waveforms are correct using LTspice. Note that the transient spice directives are commented, since we cannot simulate for two different transient times. Uncomment one of them at a time in order to run separate simulations. (6 points)



4. Explain, **in your own words**, the function of each of the parameters inside of the PULSE source we use for our RC circuit simulations. For example, say a PULSE source with the following spice directive is used: **PULSE(0 5V 10µ 1p 1p 50µ 100µ)** Explain what each of the parameters inside the parentheses indicate for this particular waveform. (2 points)