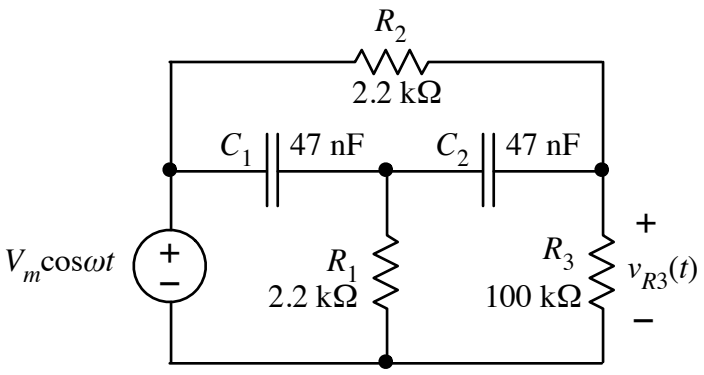
EE 201 — HW 7.21 Name_____

a. For the circuit at right, use SPICE to plot the sinusoidal voltage across the resistor R_3 together with the source voltage. Include at least four periods of the sinusoid in the plot.



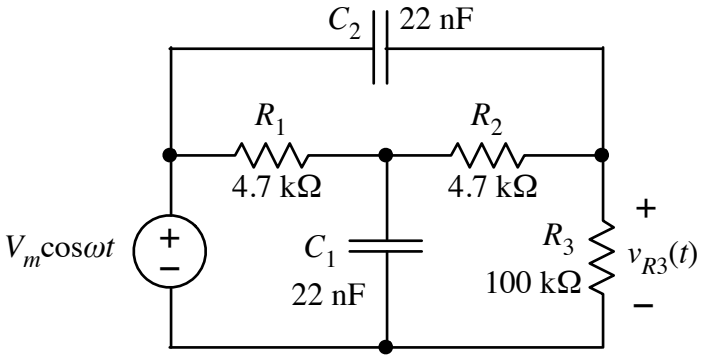
For the source $V_m = 5$ V and $f = 1591$ Hz ($\omega = 10_4$ rad/s.)

From the plots, determine the complex value of v_{R3} and and its phase shift relative to the source.

Note that there will be a transient at the start of the simulation. Determine the amplitude and phase shift from from the later periods of the plot, after the transient has disappeared.

$\tilde{v}_{R3}$ = _____

b. Repeat for the related circuit shown at right. The source amplitude and frequency are the same as in part a.



(Foreshadowing: These are known as "bridged-*T*"*RC* circuits. They will appear again in EE 230.)

$\tilde{v}_{R3}$ = _____

Write your answers — and whatever work will fit — on this sheet. Staple any sheets with additional work behind.