

LRC Series Circuit Pre-lab (Worth 4 points)

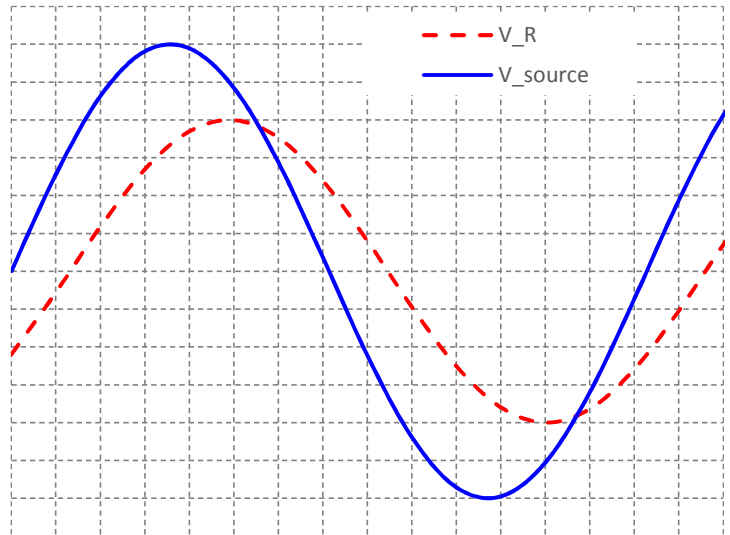
Read the example on the first page of the Series LRC lab handout in the lab manual or this will make no sense.

Furthermore, a list of useful equations is on the second page of the series LRC lab handout. The figure at right shows a scope screen. Assume each horizontal division represents $50 \mu\text{s}$.

Assume each vertical division represents 500 mV . The resistor used is $R = 470 \Omega$.

- 1) Determine the *peak-to-peak* voltage across the resistor. Answer in units of Volts (not divisions).
- 2) Determine the period of the waveforms (in μs).
- 3) Determine the time interval between the peaks (in μs).
- 4) Determine i_{max} (the current *amplitude*).
- 5) Determine the phase angle ϕ .
- 6) Write current as a function of time. Include appropriate units on any numbers in your function $i(t)$.
- 7) Is this circuit at resonance, inductively dominated, or capacitively dominated?

Name: _____



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