

Exam #5 → Thursday, April 11

→ Antes del Receso (Jueves 18)

***Miercoles 17 – ultimo dia de bajas parciales!

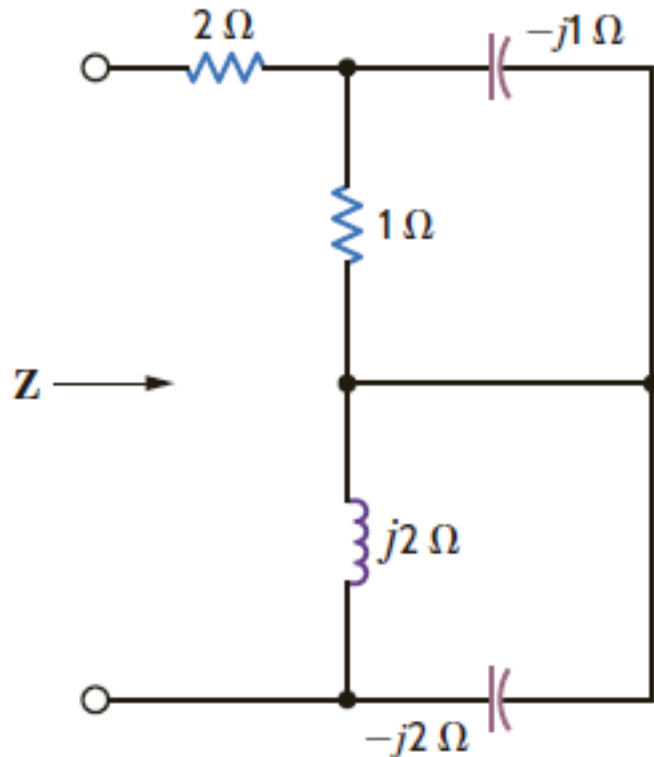
Concepts Chapter #8:

- Sinusoids and Complex Functions
- Phasors / Phasor Relationships
- Impedance & Admittance
- Circuit Analysis using Phasors

*** “Bate”: bring your own set of equations (no problems, photocopies, solutions, etc)... subject to approval by the professor

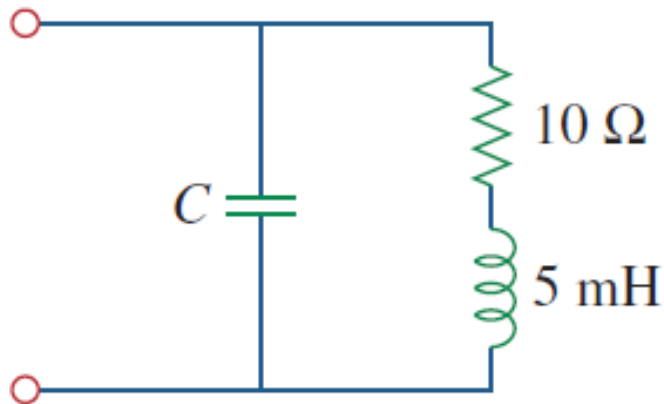
Problem 8.17

Find the frequency-domain impedance, Z , shown below.



Problem

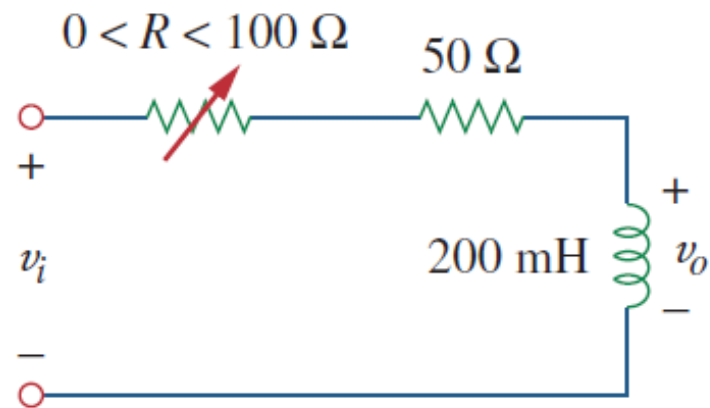
An industrial load is modeled as a series combination of an inductor and a resistance as shown in the provided figure. Calculate the value of a capacitor C across the series combination so that the net impedance is resistive at a frequency of 2 kHz.



Problem

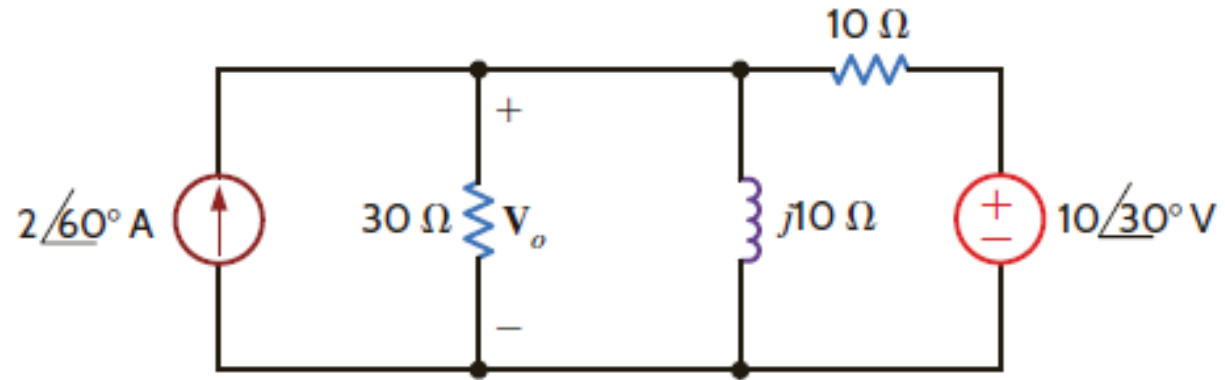
Consider the phase-shifting circuit provided. Let $V_i = 120\text{V}$ operating at 60Hz . Find:

- V_o when R is maximum,
- V_o when R is minimum,
- the value of R that will produce a phase shift of 45° .



Problem 8.61

Find V_o in the given network.



Problem 8.31

Find $i_C(t)$ and $i(t)$ in the given network.

