

Class 2

1. Reduce the circuit to its Thevenin equivalent as viewed from terminals A and B .

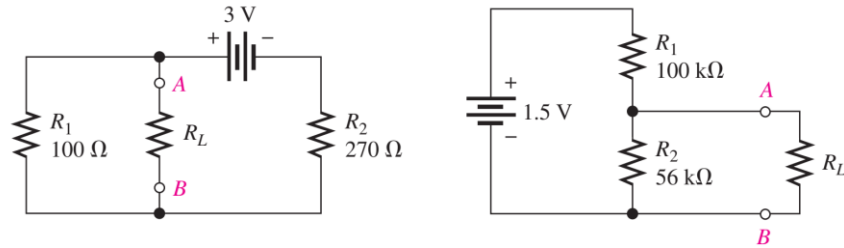


Figure 1

2. Maximum Power Transfer Theorem

Determine the value of in Figure 2 for which dissipates maximum power.

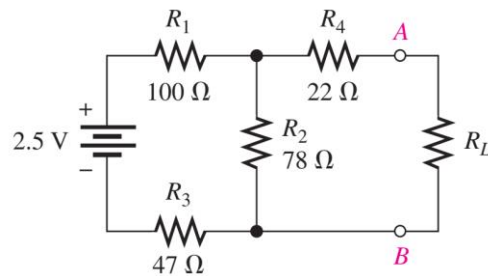


Figure 2

3. The Superposition Theorem

In Figure 3, what is the current through R_2 ?

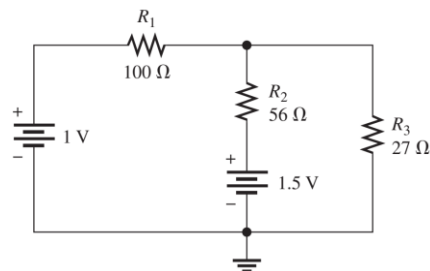


Figure 3

4. Determine the total resistance and the voltage at points A , B , and C in the circuit of Figure 4.

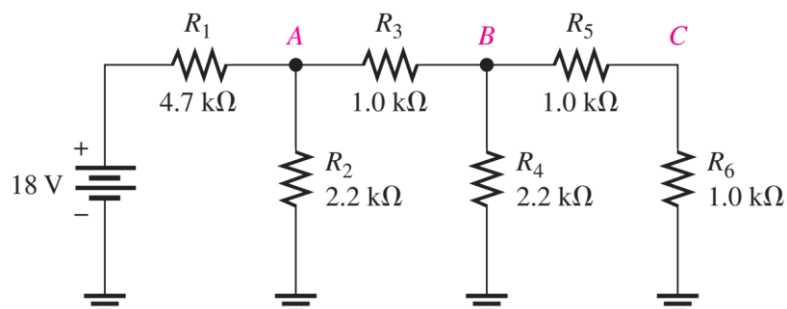


Figure 4.

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5. Find the impedance the circuit in Figure 5.

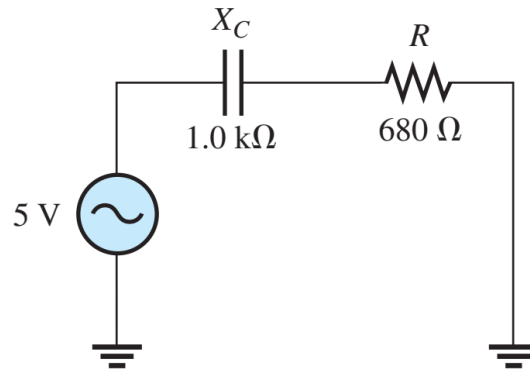


Figure 5.

6. Determine the impedance and the phase angle of the circuit in Figure 6.

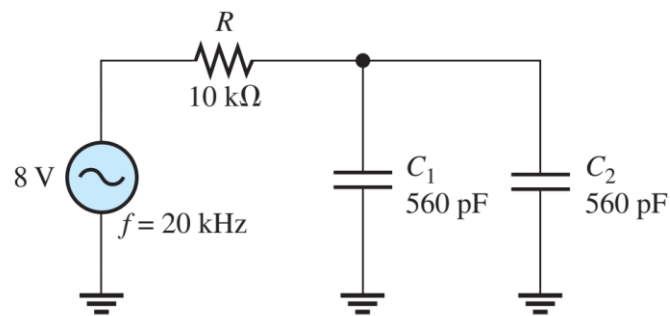


Figure 6

7. Determine the phase lag between the input voltage and the output voltage for each of the following frequencies: (a) 1 Hz (b) 100 Hz (c) 1.0 kHz (d) 10 kHz

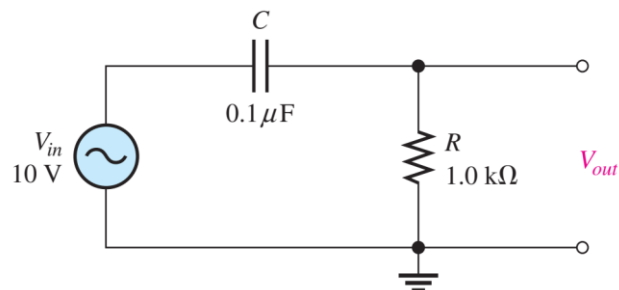


Figure 7

8. The circuit in Figure 7 also acts as a filter. Plot the frequency response curve for the circuit for a frequency range of 0 Hz to 10 kHz in 1 kHz increments