

NAME _____
PERIOD _____ DATE _____

PHYSICS QUIZ #48 D
RCL CIRCUITS

An electrical circuit is assembled as shown to the right with the following values:

$R = 35.0 \Omega$, $L = 150 \mu\text{Henry}$, $C = 880 \mu\text{Farad}$ and an audio oscillator, which has an output impedance of 50.0Ω , while generating a frequency of $f = 1200 \text{ Hz}$ with an EMF of 62.0 Volts RMS .

1. What is the impedance of this circuit at the given frequency? [3 pts]

2. What will be the RMS current flowing in this circuit? [3 pts]

3. To what frequency should the power supply be adjusted in order to generate resonance in this circuit? [3 pts]

4. How will the voltage between point A & B in the circuit compare with the voltage between points A & D? [3 pts]

5. How much power will be delivered to this circuit while at resonance? [3 pts]

