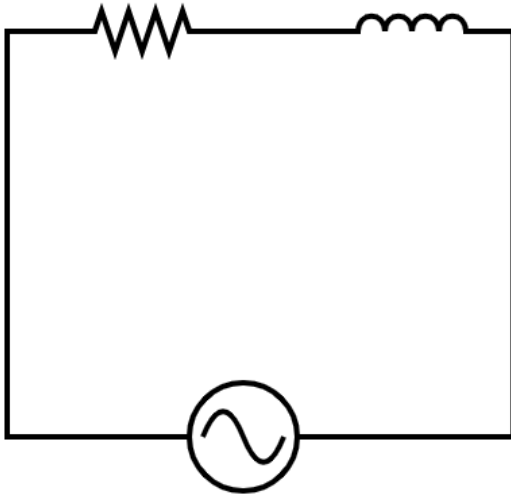


RL Circuit Powered by AC

Step 1: Fill in the voltage and frequency of the power supply, the resistance of the resistor, and the inductance of the inductor. Neatly calculate the impedance of the inductor for this frequency in the space to the right of the circuit



Step 2: Calculate the effective impedance of the circuit. Show your work below.

Step 3: Calculate the root mean square current for this circuit and then the root mean square voltage of each of the components. Put your currents and voltages into the picture above. Enter your answers into your program to check that you did everything properly

Step 4: Explain what happens to the impedance of the inductor as the frequency of the power supply increases. What will this do to the current in the circuit and the voltage on each component?.