Construct the circuit below and set the sinusoidal source to 1 KHz with 1 volt amplitude.

Using the oscilloscope determine the magnitude and phase of the voltage across the 47 Ohm resistor with respect to the source. Note that the current through the circuit will be the resistor voltage divided by the resistance.

Represent the input and output voltages by phasors and determine the impedance of the circuit by dividing the input phasor by the current phasor.

Verify that your results are correct by calculating the impedance "by hand".

Figure 1
An RLC resonant circuit.