Lecture/Lab 16

Construct the circuit below and plot the gain of the circuit against frequency for frequencies from 10Hz to 10KHz. The gain is defined as the ratio of the output voltage to the input voltage. To determine the gain at a particular frequency, measure the peak to peak output voltage and divide that value by the peak to peak input voltage.

The circuit is an example of a resonant circuit and it will be particularly sensitive to changes in frequency around the resonant frequency point. Calculate the resonant frequency as $1/(\text{don't forget that this is in radians})$. For your graph you may want to collect extra frequency sample points around this resonant frequency. $LC$

![Figure 1](image)

An RLC resonant circuit