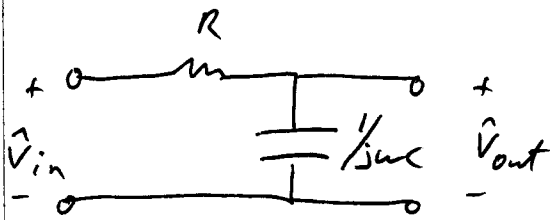
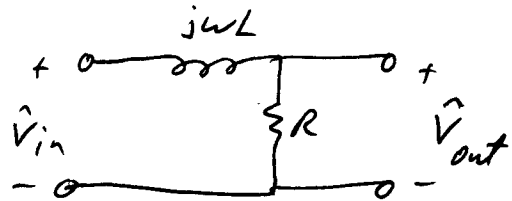


INSIGHTS FOR FILTER DESIGN

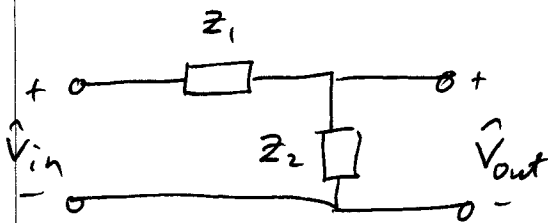


$H_1(\omega) =$



$H_2(\omega) =$

Both filters are voltage dividers of the general form



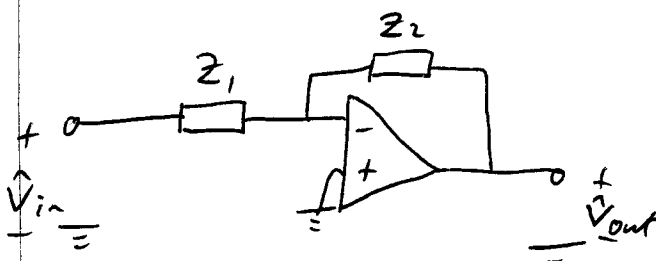
$H(\omega) =$

In RC circuit:

In RL circuit:

Is there a way to combine these behaviors to produce a "better" low-pass filter? [See Homework 4]

Hint for LAB: What can you choose for  $Z_1$  +  $Z_2$ ?



$H(\omega) = \frac{\hat{V}_{out}}{\hat{V}_{in}} = - \frac{Z_2}{Z_1}$