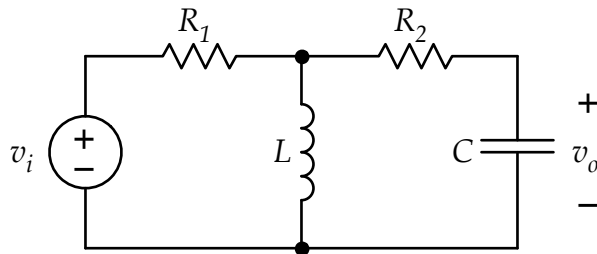Name_____

Calculate the transfer function for the second-order filter circuit shown below. Express your function in symbolic form $(R, L, C, \text{etc.})$

Choose values for the components so that the second-order response has $\omega_0 = 100{,}000$ rad/s ($\pm 5\%$) and $Q = 0.4$ ($\pm 5\%$). Try to choose component values that are "reasonable".

Confirm your design using by generating magnitude and phase frequency responses curves using SPICE. Indicate on the plots the key features that show that the circuit meets the design requirements.

$T(s) = $ _____

$R_1 = $ _____, $R_2 = $ _____

$L = $ _____, $C = $ _____