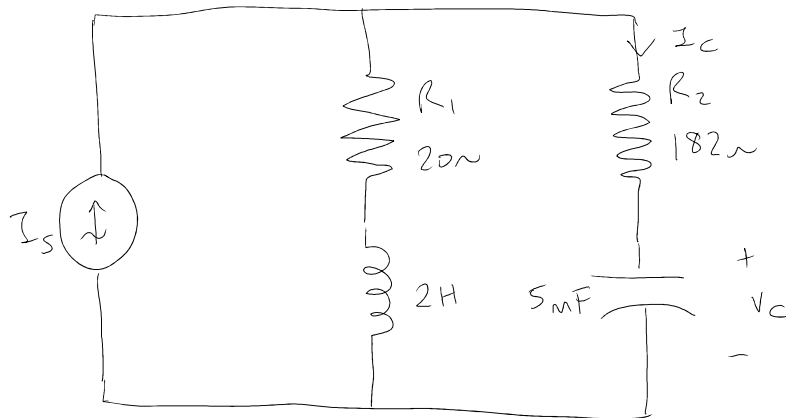


At Tutorial 11 – Marked Question (4th October 2019)

Chapter 16, Ex 39

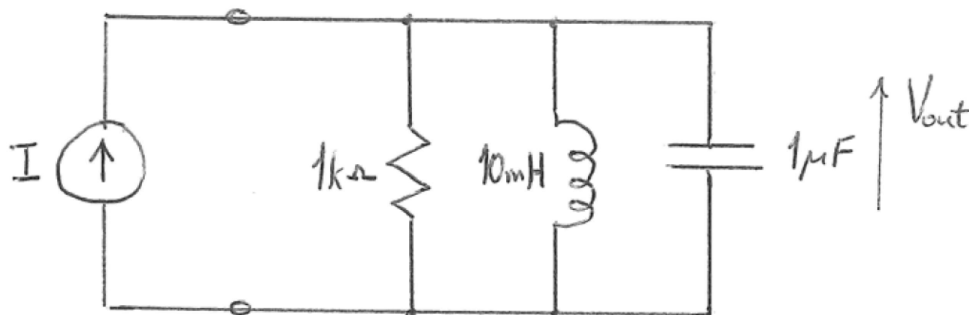
For the circuit below, draw Bode amplitude and phase plots for the transfer function $\mathbf{H(s) = V_c/I_s}$.



At Tutorial 11 – Unmarked Questions (4th October 2019)

Q4: Bode for parallel RLC

Construct the magnitude and phase Bode diagrams for the parallel RLC circuit below, with $\mathbf{H(s) = V_{out}(s)/I(s)}$.



Q5: Bode sketch

Sketch the Bode diagram for

$$H(s) = \frac{0.25s + 25}{s^2 + 10s + 25}$$

Q6: Static gain and Bode sketch

Given

$$I(s) = \frac{K(s + 10)}{s^2 + 101s + 100}$$

find K such that the static gain (gain at very low frequencies) is unity (0dB) then sketch the Bode diagram for the transfer function.

Chapter 16, Ex 60a) and b)

- Construct a Bode magnitude plot for the transfer function $\mathbf{H(s) = 1 + \frac{20}{s} + \frac{400}{s^2}}$
- Compare the Bode plot and exact values at $\omega = 5$ and 100 rad/s.