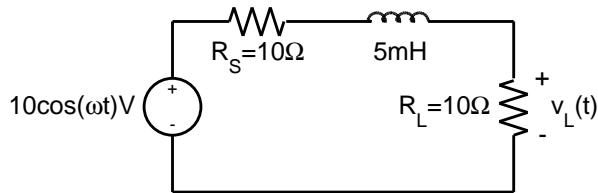


ELEC 243
 Problem Set 10
 Homework Section
 Due: April 10, 2015

H10.1 Work Problem 5.8 in K&I.

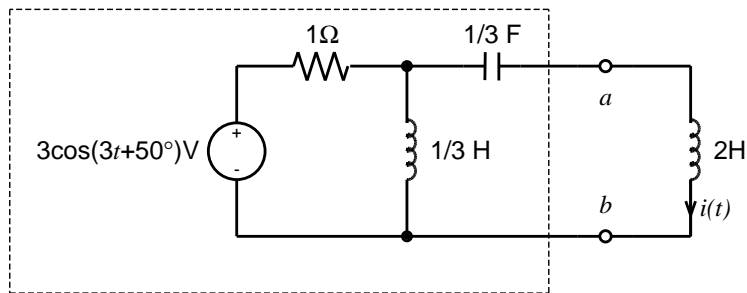
H10.2 Work Problem 5.16 in K&I.

H10.3 Determine the frequency of the source at which the magnitude of the voltage across R_L is one-half the value it has when the source is dc ($\omega = 0$).



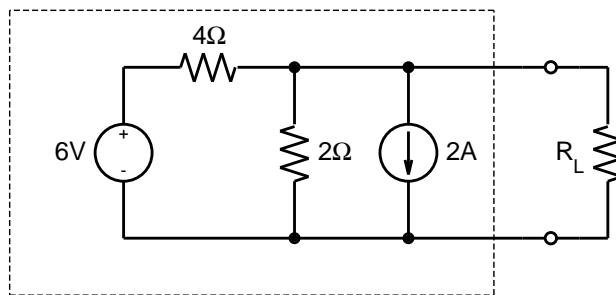
H10.4 For the circuit shown below,

- (a) Find the Thévenin equivalent of the circuit in the box.
- (b) Use (a) to find $i(t)$.



H10.5 For the circuit below, find

- (a) The Thévenin equivalent of the circuit in the box.
- (b) The value of the load resistance R_L such that maximum power will be delivered to the load.
- (c) The value of the power delivered to the load in part (b).



Continued on next page.

H10.6 If $v_s = 120 \cos(\omega t)$, find the average power delivered to each resistor in the circuit below. Assume the transformers are ideal.

