

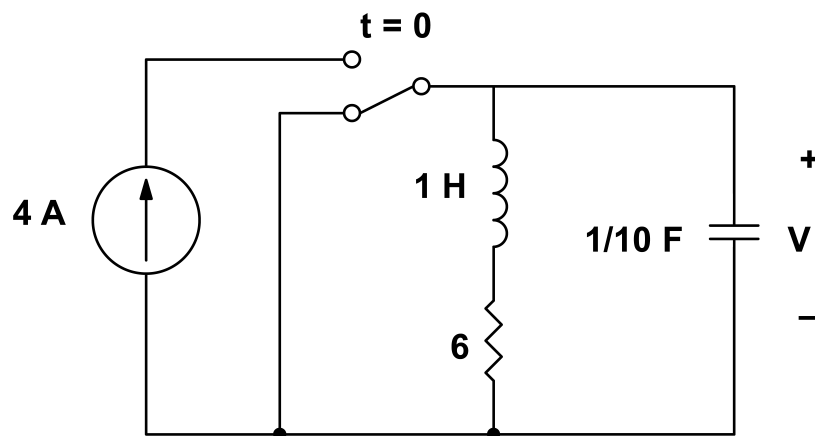
ECE 2350 CIRCUIT ANALYSIS I

Homework 9 Revised
24 March 2020

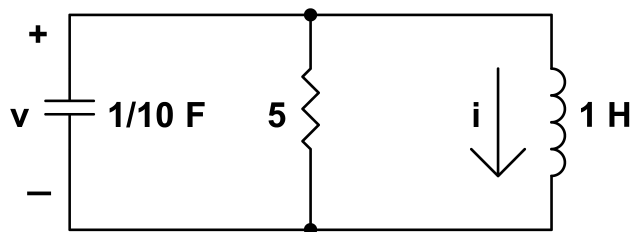
Professor Dunham
Due: 7 April 2020

Review Lecture Notes.

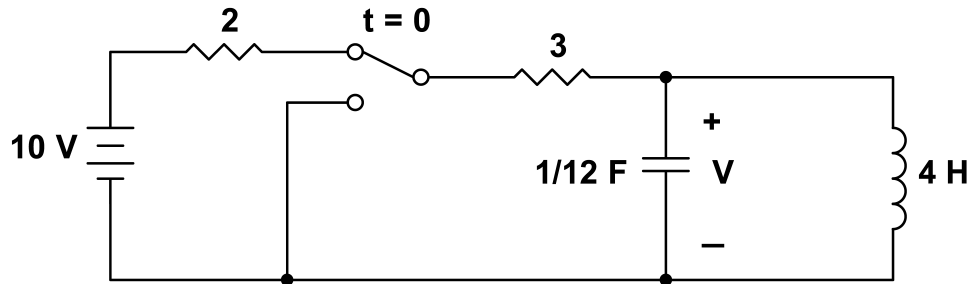
1. In the circuit shown below, the switch moves to the second position at time $t = 0$. Find $v(t)$ for all time t . For this circuit, specify the damping ratio, the undamped natural frequency and the damped natural frequency if it is defined.



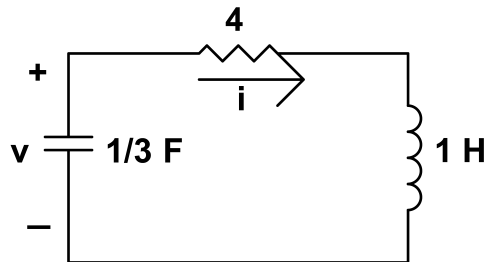
2. In the circuit shown below, $v(0) = 0\text{V}$ and $i(0) = -\frac{3}{2}\text{A}$. Find $v(t)$ for $t \geq 0$. For this circuit, specify the damping ratio, the undamped natural frequency and the damped natural frequency if it is defined.



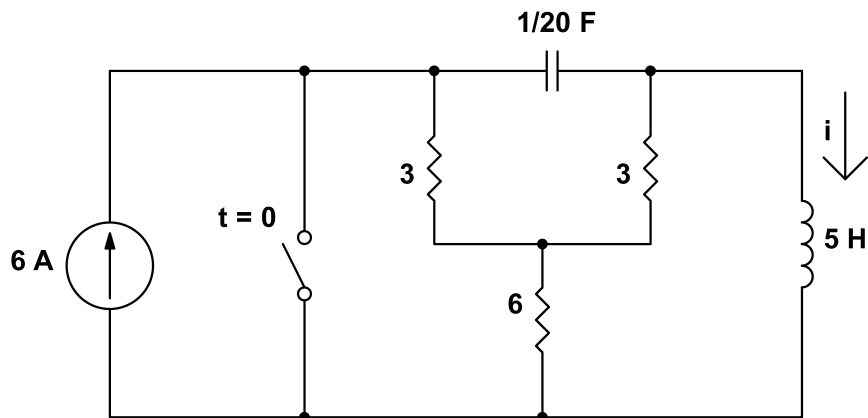
3. In the circuit shown below, the switch moves to the second position at time $t = 0$. Find $v(t)$ for all time t . For this circuit, specify the damping ratio, the undamped natural frequency and the damped natural frequency if it is defined.



4. In the circuit shown below, $v(0) = 4\text{ V}$ and $i(0) = 2\text{ A}$. Find $i(t)$ for $t \geq 0$. For this circuit, specify the damping ratio, the undamped natural frequency and the damped natural frequency if it is defined.



5. In the circuit shown below, the switch closes at time $t = 0$. Find $i(t)$ for all time t . For this circuit, specify the damping ratio, the undamped natural frequency and the damped natural frequency if it is defined.



6. In the circuit shown below, the switch moves to the second position at time $t = 0$. Find $i(t)$ for all time t . For this circuit, specify the damping ratio, the undamped natural frequency and the damped natural frequency if it is defined.

