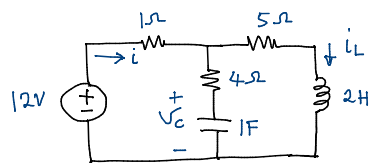


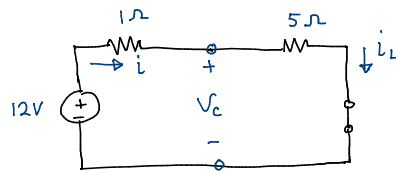
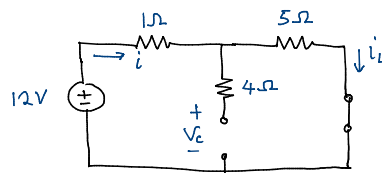
### Example 4

Lecture: 19/2/14



- To find  $i_L$ ,  $V_L$  and  $V_C$
- To find energy stored in capacitor and inductor

Under DC Condition, C is open-circuited and L is short-circuited.



$$i = i_L = \frac{12}{1+5} = 2 \text{ A}$$

$$V_C = 5i_L = 5 \times 2 = 10 \text{ V}$$

$$W_L = \frac{1}{2} L i^2 = \frac{1}{2} \times 2 \times 2^2 = 4 \text{ J}$$

$$W_C = \frac{1}{2} C V^2 = \frac{1}{2} \times 1 \times 10^2 = 50 \text{ J}$$