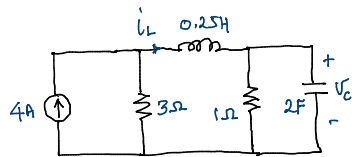
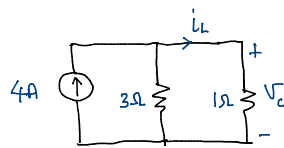
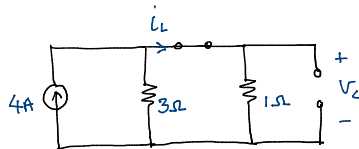


Example 5
Lecture: 20/2/14



- To find V_c and i_L
- To find energy stored in the capacitor and inductor.



$$\begin{aligned}
 V_c &= 4 \times 3 \parallel 1 \\
 &= 4 \times \frac{3 \times 1}{3+1} \\
 &= 3V \\
 i_L &= \frac{V_c}{1\Omega} = 3A
 \end{aligned}$$

Energy stored in the capacitor, $W_c = \frac{1}{2} C V^2$

$$\begin{aligned}
 &= \frac{1}{2} \times 2 \times 3^2 \\
 &= 9J *
 \end{aligned}$$

Energy stored in the inductor, $W_L = \frac{1}{2} L i^2$

$$\begin{aligned}
 &= \frac{1}{2} \times 0.25 \times 3^2 \\
 &= 1.125J *
 \end{aligned}$$