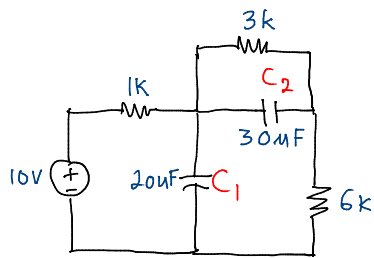
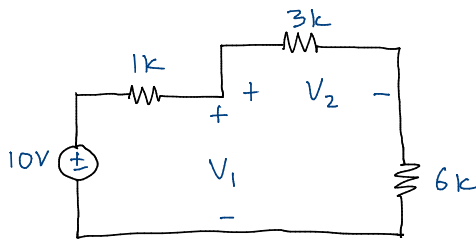


Example 2:
 Lecture 14/2/14
 Capacitors under DC Condition
 Steady-state



Under DC condition, C_1 and C_2 are open-circuited.



$$V_1 = \frac{3k + 6k}{1k + 3k + 6k} \times 10V$$

$$= 9V$$

$$V_2 = \frac{3k}{9k} \times 9V = 3V$$

Energy stored in C_1 , $W_1 = \frac{1}{2} C_1 V_1^2$

$$= \frac{1}{2} \times 20\mu \times 9^2$$

$$= 810\mu J$$

Energy stored in C_2 , $W_2 = \frac{1}{2} C_2 V_2^2$

$$= \frac{1}{2} \times 30\mu \times 3^2$$

$$= 135\mu J$$