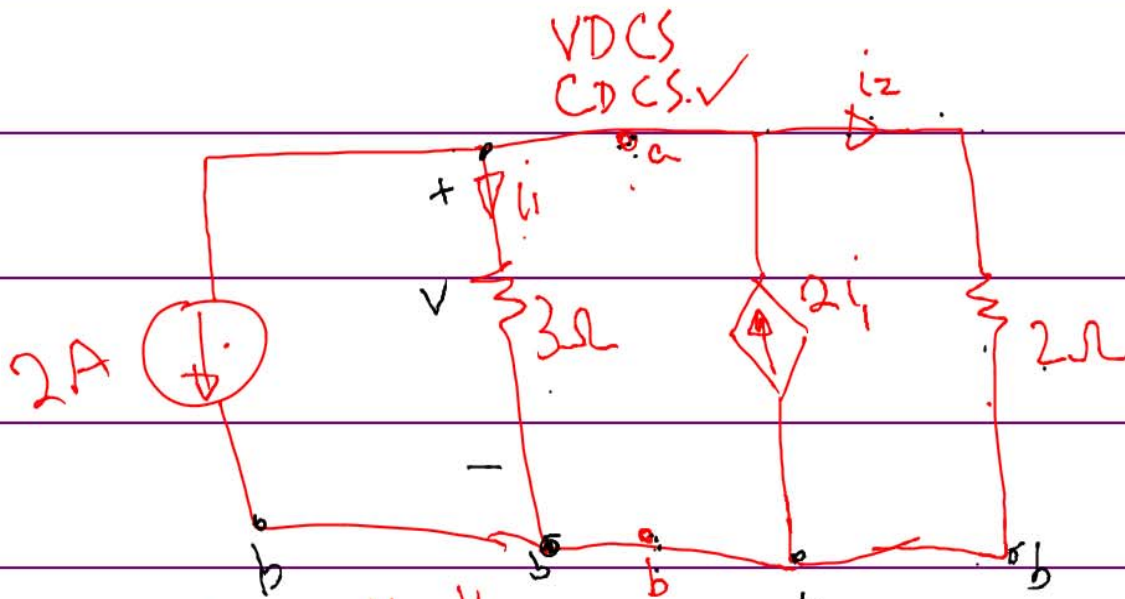
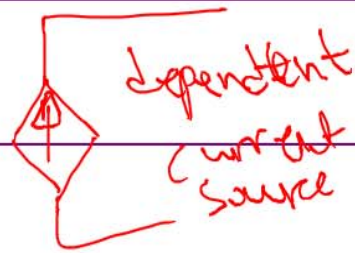
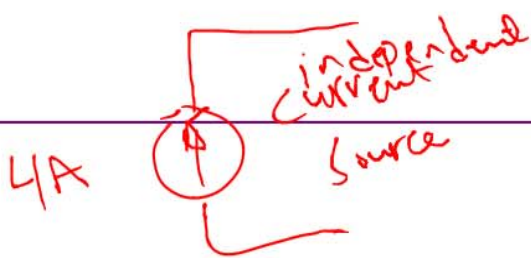
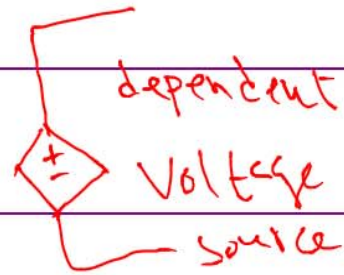
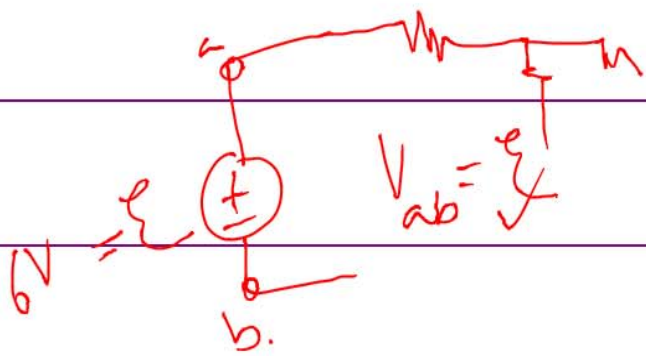


Independent & Dependent Sources



$$V \equiv V_{ab} \equiv V_a - V_b = i_2 \cdot 2 \quad i_1, i_2, V$$

$$\textcircled{1} \quad 2 + i_1 - 2i_1 + i_2 = 0 \Rightarrow i_1 = 2 + i_2$$

$$V = 2i_2 \quad \textcircled{2}$$

$$V = 3i_1 \quad \textcircled{3}$$

$$i_1 = 2 + \frac{3}{2}i_2$$

$$-2 = \frac{1}{2}i_2$$

$$i_2 = -\frac{4}{2} = -2$$

$$i_2 = -6 \text{ A}$$

$$i_1 = -4 \text{ A}$$

$$i_1 = -2 \text{ A}$$

$$V = 3 \cdot (-4) = -12 \text{ volt}$$