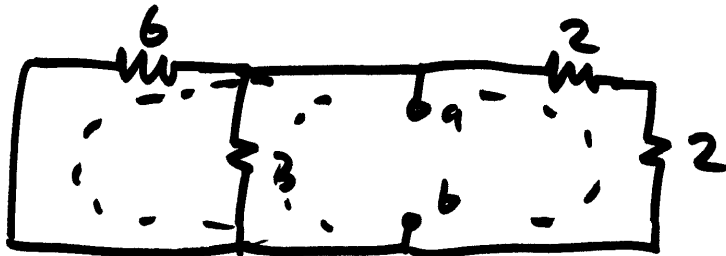


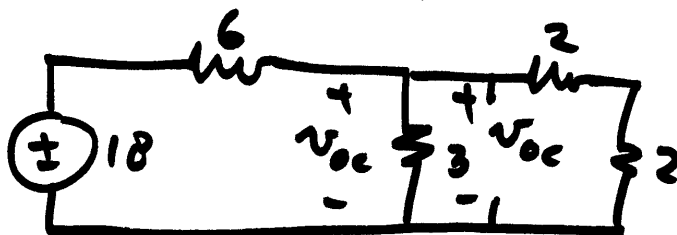
MAX POWER  $R_L = ?$

$P_{MAX} \text{ IN } R_L = ?$

$v_0 = ?$  AT MAX POWER



$$R_L = R_S = 6 \parallel 3 \parallel (2+2) = 1.333$$



$$v_{oc} = \frac{R_{OFF}}{6 + R_{OFF}} 18$$

$$= \frac{1.714}{7.714} 18 = 4 \text{ V}$$

$$R_{OFF} = 3 \parallel (2+2)$$

$$= 1.714$$

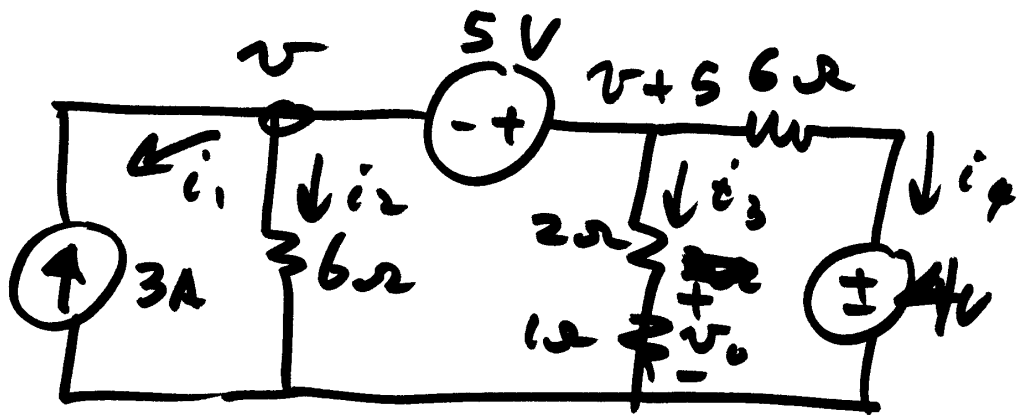
$$\text{SO } R_L = \underline{1.333}$$

$$V_S = 4 \text{ V}$$

$$P_{\text{MAX}} = \frac{1}{4} \frac{V_S^2}{R_L} = \underline{\frac{3 \text{ W}}{2}}$$

$$\text{ALSO } V_L = \frac{1}{2} V_S = 2 \text{ V}$$

$$V_O = \frac{2}{2+2} V_L = \underline{\frac{1 \text{ V}}{2}}$$



$v_0 = ?$  NOOE EQ FOR

$$i_1 + i_2 + i_3 + i_4 = 0$$

$$-3 + \frac{v}{6} + \frac{v+5}{3} + \frac{v+5-4}{6} = 0$$

$$\left(\frac{1}{6} + \frac{1}{3} + \frac{1}{6}\right)v = 3 - \frac{5}{3} - \frac{1}{6}$$

$$v = 1.75 \text{ V} \quad v+5 = 6.75$$

$$v_0 = \frac{1}{1+2} v = \frac{6.75}{3} = \underline{\underline{2.25 \text{ V}}}$$