

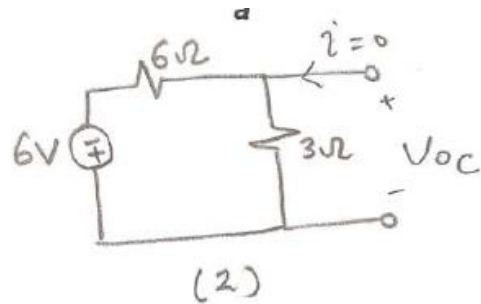
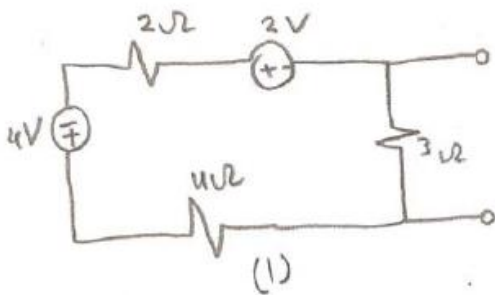
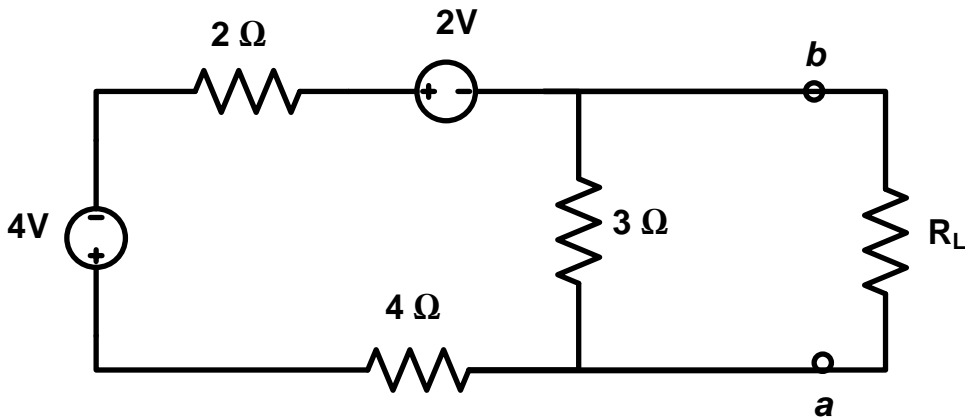
King Fahd University Of Petroleum & Minerals  
 Department of Electrical Engineering  
2009-2010 First Semester (091)

**EE204 - Quiz # 2**

Ser	Name	ID#	SEC#

Find Thevenin equivalent of the given circuit with respect to the left of terminal b-a, and sketch the equivalent circuit.

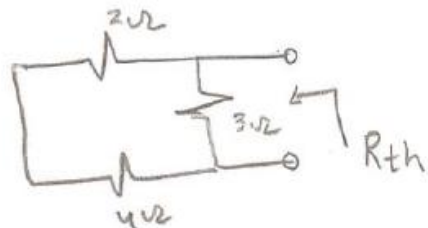
What is  $R_L$  that maximizes the power transfer to it and what is this maximum power transfer to  $R_L$ .



by voltage division:-

$$V_{oc} = \frac{3}{3+6} (-6) = -\frac{18}{9} = -2 \text{ V}$$

$$R_{th} = (2\Omega + 4\Omega) \parallel 3\Omega = 6\Omega \parallel 3\Omega = 2\Omega$$



$$\therefore R_L = R_{th} = 2\Omega$$

$$\therefore P_{L \max} = \frac{V_{oc}^2}{4R_L} = \frac{4}{4(2)} = \frac{1}{2} \text{ W}$$

