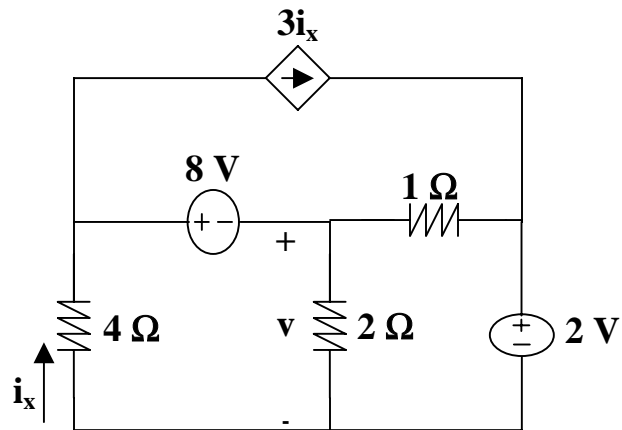


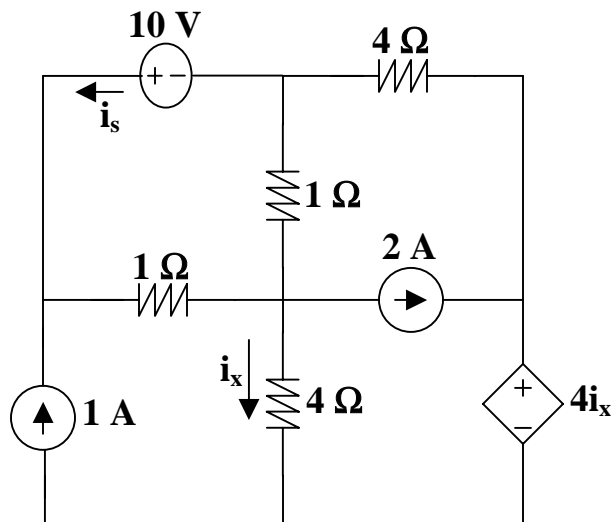
EE 209 Midterm #1

Problem 1: (25 pts)



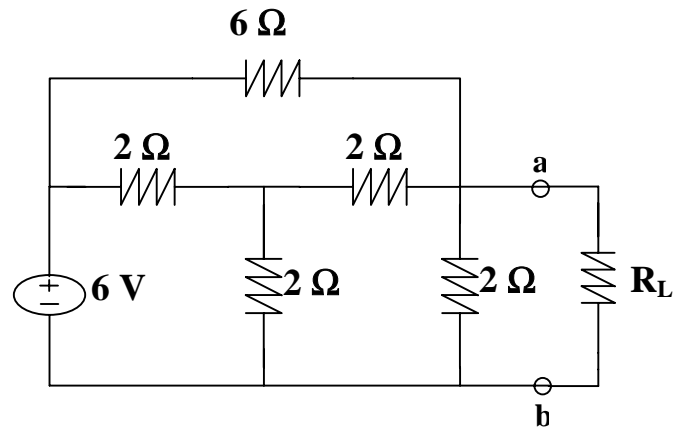
- Find  $v$  by node analysis.
- Determine the power of the 8 V source. Is it being delivered or absorbed ?

Problem 2: (25 pts)

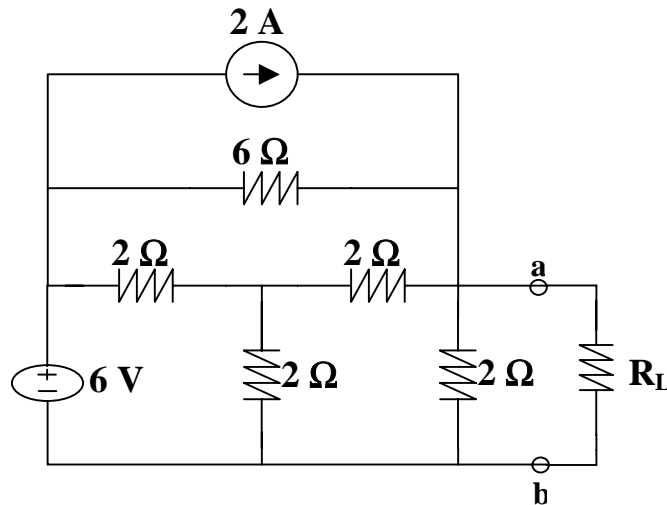


Find  $i_s$  using mesh analysis.

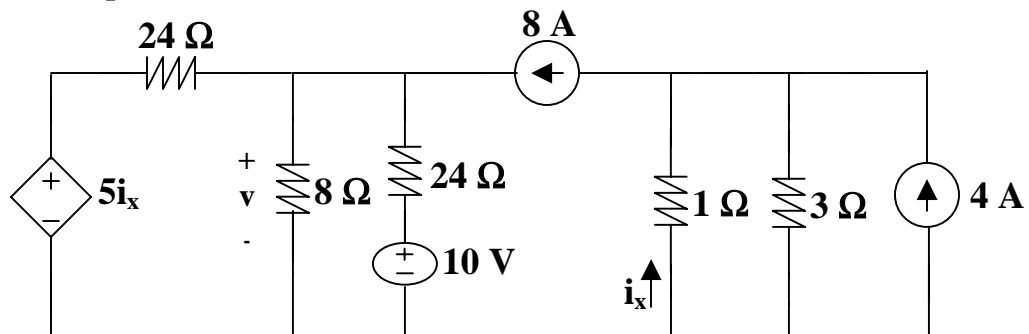
**Problem 3: (25pts)**



- Find  $R_L$  to maximize the transferred power to a-b port.
- Calculate the maximum power.
- A 2A current source is connected in parallel to the  $6\Omega$  resistor as shown below. Calculate the maximum power transferred when both sources are on.



**Problem 4: (25 pts)**



Find  $v$  using superposition principle.