

Name _____

EE/EET 2240-01/02

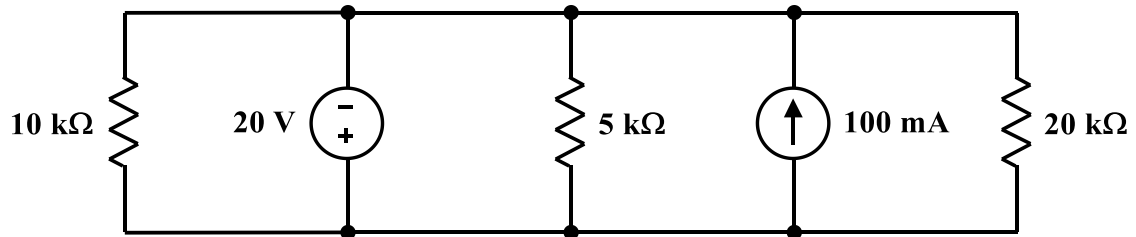
Exam #1

Thursday, February 15, 2018

LIBR B-13 and TAB 115, 9:30AM – 10:45AM

[closed book – one two-sided 8½”×11” page of notes and calculator allowed, nothing else]

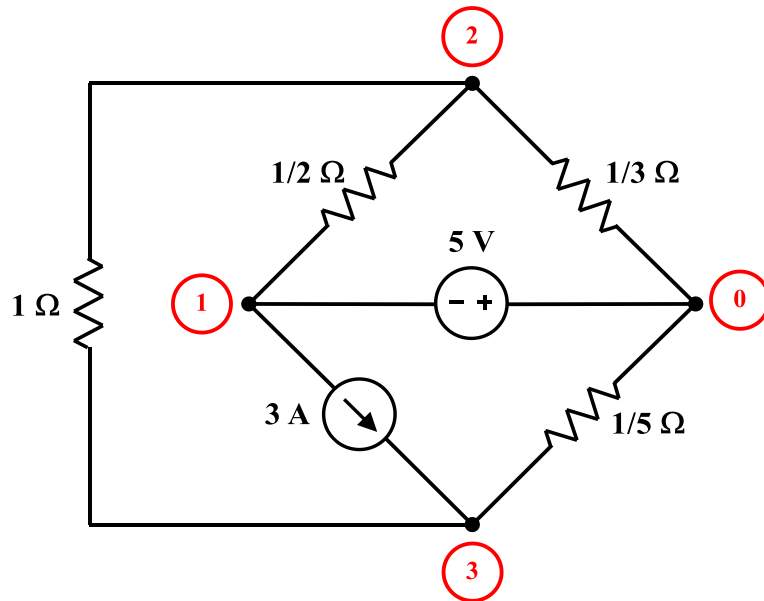
1. For the circuit shown below:



(a) Is the independent current source *absorbing* power or *delivering* power?

(b) How much?

2. Determine a set of equations that could be used to analyze the circuit shown by the nodal-analysis method, and express them in the standard matrix form used in class. Use the node labels that are already assigned. *Do not attempt to solve the equations.*



3. A set of simultaneous linear equations is given in standard matrix form below. Use any method to determine the numerical value of y . ***Check your solution; there will be very little partial credit on this problem.***

$$\begin{bmatrix} 1 & 2 & 1 \\ 4 & 4 & 7 \\ 2 & 2 & 3 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 14 \\ 41 \\ 19 \end{bmatrix}$$

4. Determine the value of R_{eq} with respect to terminals A-B.

