Name _____

EE/EET 2240

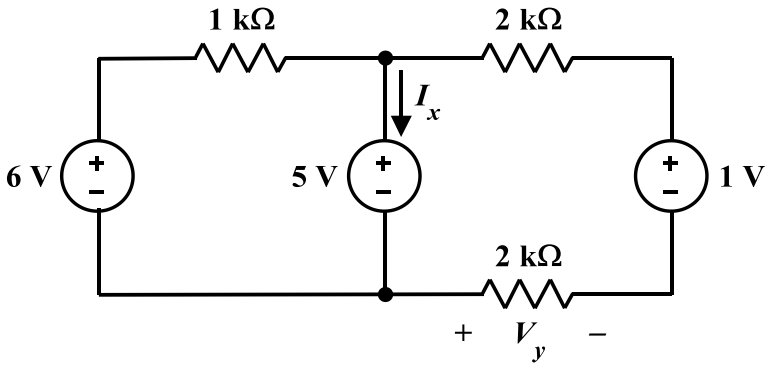
Exam #1

Thursday, September 20, 2018

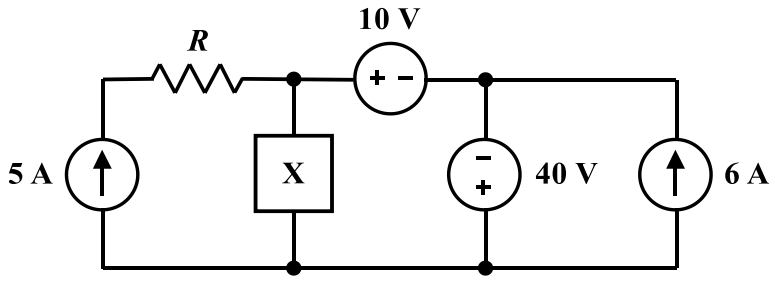
LIBR B03 and TAB 115, 9:30AM – 10:45AM

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

1. Determine the numerical values of I_x and V_y. **SHOW YOUR WORK, and include units and proper signs with your answers.**



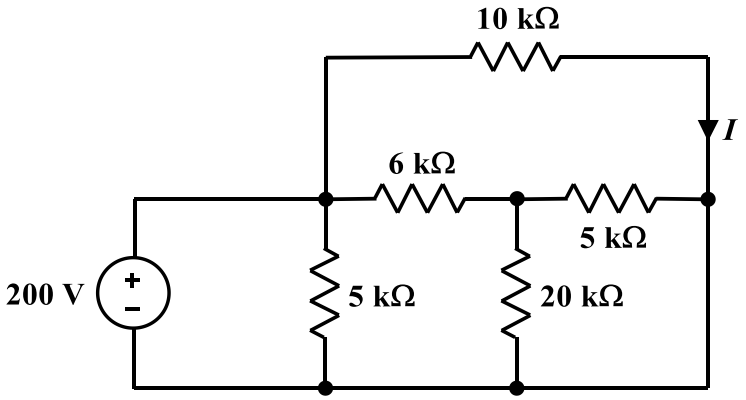
2. The 5A current source is delivering 25W, and the 40V source is delivering 80W.



(a) Determine the value of resistor *R*. **SHOW YOUR WORK, and include units with your answer.**

(b) Is component *X* absorbing power or delivering power? How much? **SHOW YOUR WORK, and include units with your answer.**

3. Determine the numerical value of the current I . **SHOW YOUR WORK, and include units and proper sign with your answer.**



4. Use the nodal analysis method to formulate a system of simultaneous linear equations representing the circuit shown below. Express the equations in the matrix form discussed in class. **SHOW YOUR WORK.**

   Do not attempt to solve the equations.