Rose-Hulman Institute of Technology

ECE 207 Fall 2004   **Quiz 1**   Name_____

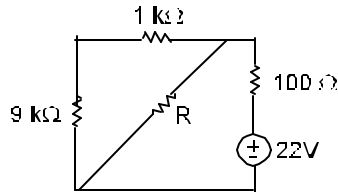   CM_____   Score_____

Check all statements either True or False (**T/F**)   (1pt each)

___   In nodal analysis, the number of nodes minus the number of voltage sources is equal to the number of required KCL equations.
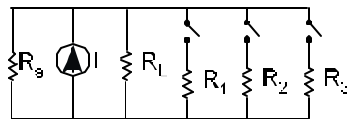

circuit for first
THREE questions

___   If nodal analysis were performed on the circuit above, three KCL equations would be required.

___   When the resistance of R is decreased, the power delivered by the voltage source increases.
Why or why not? _____

_____

___   As R decreases, the magnitude of the voltage across it decreases.

circuit for next
FOUR questions

___   If one or more of the switches are closed, the power delivered by the current source will increase from that delivered when all switches are open.
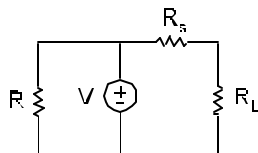
___   If one or more of the switches are closed, the voltage across R_s will decrease from that present when all switches are open.
Why or why not? _____

_____

___   If one or more of the switches are closed, the current through R_L will increase from that present when all switches are open.

___   With all switches OPEN, $R_s=6\Omega$ if the following conditions are true:
I=2A, the voltage across **R_L is 10V**, and the current through **R_L is 1/3A**.

circuit for last
TWO questions

___   If additional resistances are place in parallel with R_L, the power absorbed by R_s will increase

___   If resistances are placed in parallel with R, the power *absorbed* by R_s will remain the same, and the power *delivered* by the voltage source will increase.
Why or why not? _____

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