Name: Solution

EE301/303 Sept. 9, 2011
Quiz 1 – No Calculators – pencil (or pen) and paper only

Problem 1:
1. Write KCL equations at Node A
2. What is the voltage drop across $R_3$ (Ohm's Law)?

\[ \text{KCL at A}: i_{V_5} - i_1 - i_3 = 0 \]
\[ V_{R_3} = R_3 i_3 \]

Problem 2: Write KVL equation for the outer loop. Use the passive sign convention for the current source.

\[ -V_{S_1} - V_{R_2} + V_{R_3} - V_{S_2} = 0 \]

Problem 3:
1. Using the passive sign convention, mark current directions and signs on the resistors and voltage source.
2. Identify all nodes (trivial and non-trivial)
3. Identify all meshes.

\[ \text{Note: Resistors Can Be Reverse} \]
\[ + \text{just need} \]
\[ \text{Tail} \rightarrow + \]
\[ \text{Tip} \rightarrow - \]