**Assignment 3**

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**Lecture Section: L06**

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**P2.48 –**

KVL Loop V1-V2 CCW:

KCL Node V1:

KCL Node V2:

**The current**

**P2.52 –**

I chose to place the Reference Node between the 2 Ohm resistor and the 5 Ohm resistor.

KVL Loop R2-R5-R10 CCW:

KCL RefNode:

Since the current flows through the 20 Ohm resistor and the voltage source and comes out the same node the current is just 2A.

KCL Node V1:

KVL Substitution:

KCL RefNode Sub:

The 20 Ohm Resistor does not have any effect as the current flowing into Node V1 will still be 2A.

**P2.58 –**

KVL LOOP CCW:

KCL Node V2:

KCL Node V1:

Since the VS and R8 can be described as having coming in and going out it can be said that:

Substitution:

Since the 8 Ohm resistor is in parallel they can be said to have the same voltage, and the current for the resistor is:

**The power absorbed by the 8 ohm resistor is 355.55W**