

EN.520.230: Mastering Electronics
Homework 3

Problems (13): 3.2, 3.4, 3.6, 3.8, 3.10, 3.12, 3.14, 3.16, 3.18, 3.20, 3.22, 3.24, 3.26

3.2. Using Nodal analysis find the nodal voltages V_1 , V_2 , and V_3 in the circuit in Figure 3.25. Also find the power delivered by the 9 A current source.

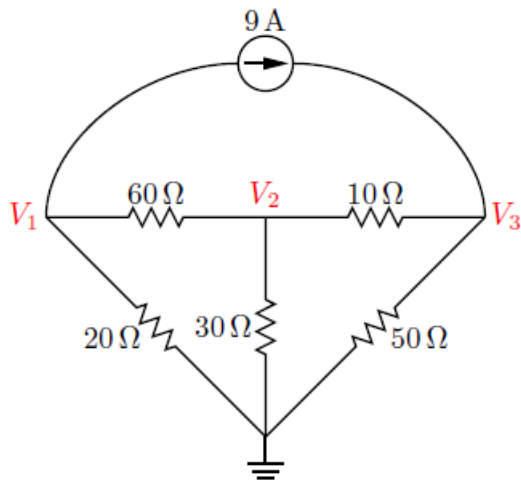


Figure 3.25

3.4. Using Nodal analysis find I_1 and I_2 in the circuit in Figure 3.27.

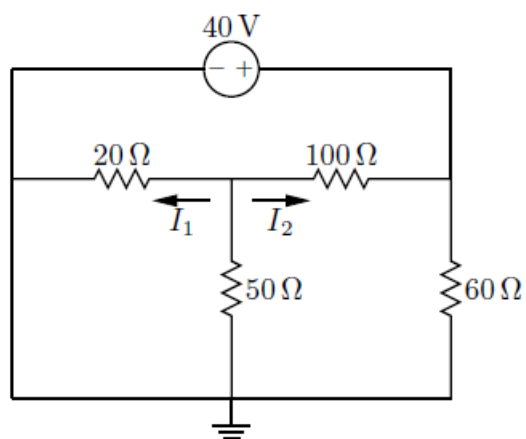


Figure 3.27

3.6. Using Nodal analysis find all nodal voltages indicated in the figure in the circuit in Figure 3.29.

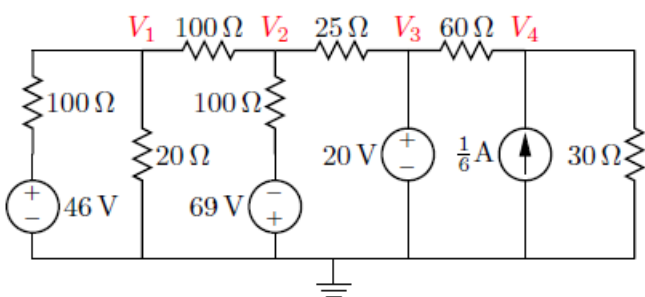


Figure 3.29

3.8. Using Nodal analysis find all nodal voltages indicated in the circuit in Figure 3.31. Also find the current I .

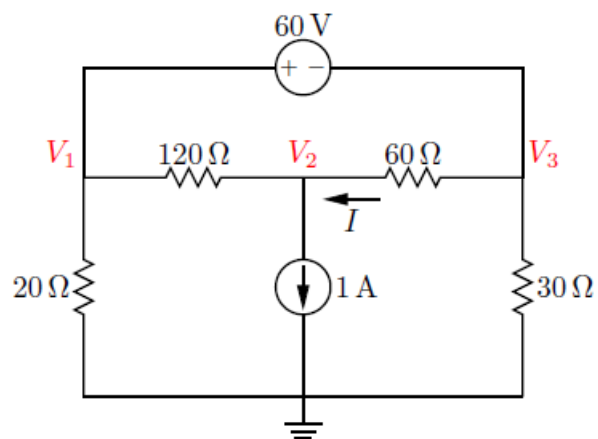


Figure 3.31

3.10. Using Nodal analysis find all nodal voltages indicated in the circuit in Figure 3.33.

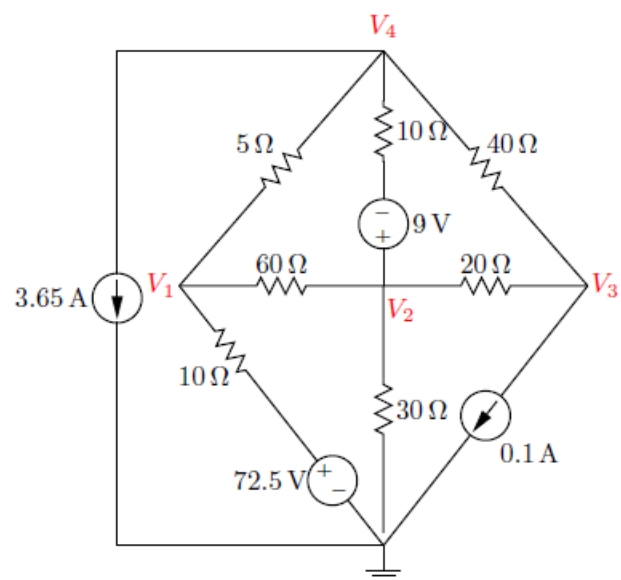


Figure 3.33

3.12. Using Nodal analysis find all nodal voltages indicated in the figure in the circuit in Figure 3.35. Also find the power delivered by the independent voltage source.

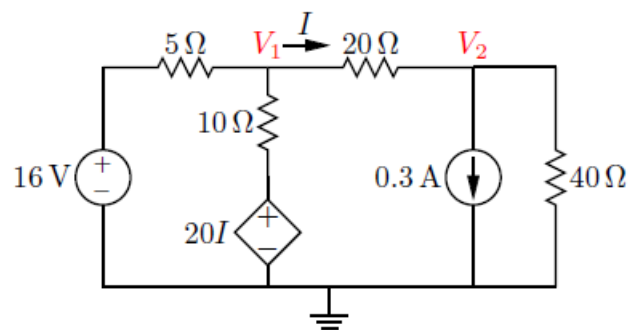


Figure 3.35

3.14. Using Nodal analysis find all nodal voltages indicated in the circuit in Figure 3.37. Also find the current I .

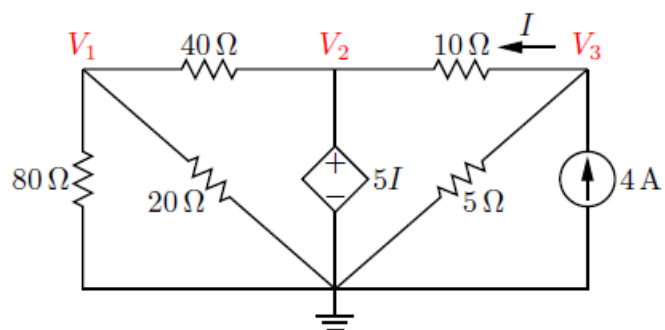


Figure 3.37

3.16. Using Nodal analysis find all nodal voltages indicated in the circuit in Figure 3.39.

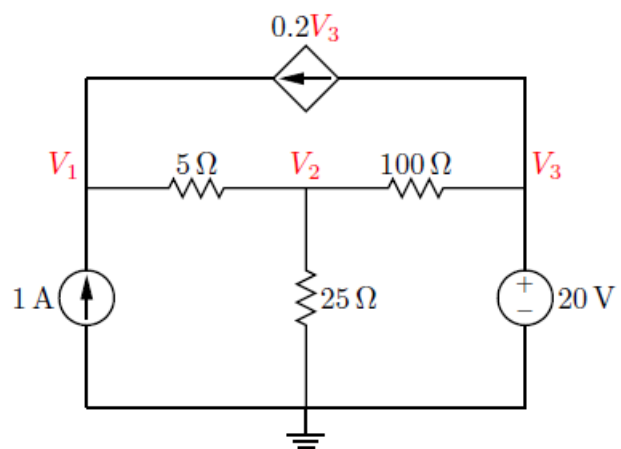


Figure 3.39

3.18. Using Nodal analysis find all nodal voltages indicated in the circuit in Figure 3.41.

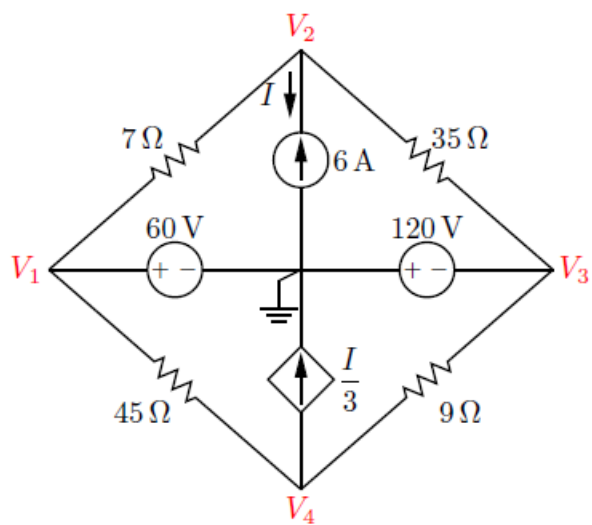


Figure 3.41

3.20. Using Mesh analysis find all mesh currents indicated in the circuit in Figure 3.43. Also find the power absorbed by the independent voltage source.

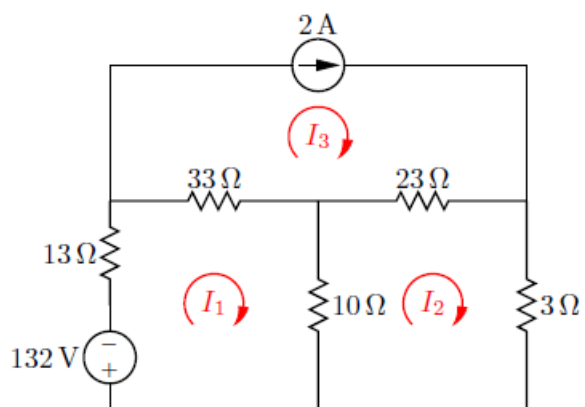


Figure 3.43

3.22. Using Mesh analysis find all mesh currents indicated in the circuit in Figure 3.45. Also find the power delivered by the 47-V voltage source.

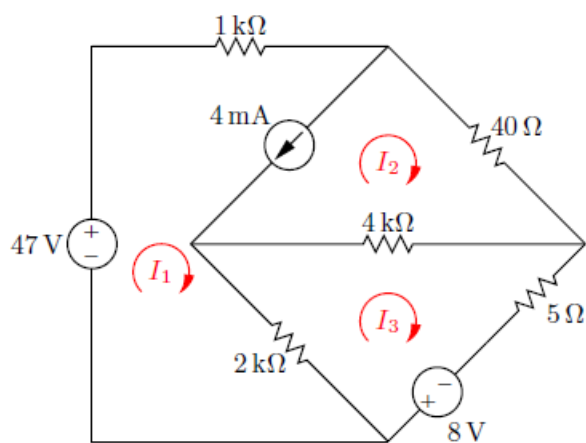


Figure 3.45

3.24. Using Mesh analysis find all mesh currents indicated in the circuit in Figure 3.47. Also find the power absorbed by the dependent voltage source.

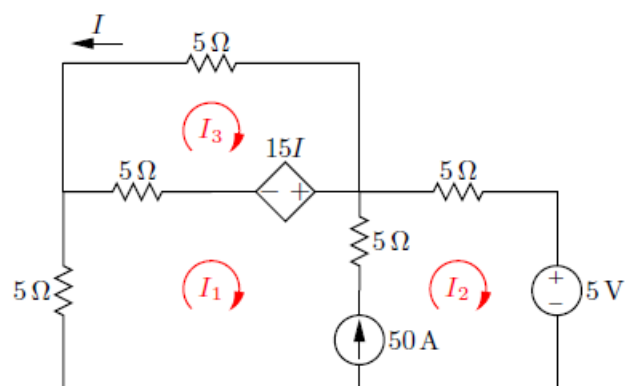


Figure 3.47

3.26. Using Mesh analysis find all mesh currents indicated in the figure in the circuit in Figure 3.49. Also find the power delivered by the dependent current source.

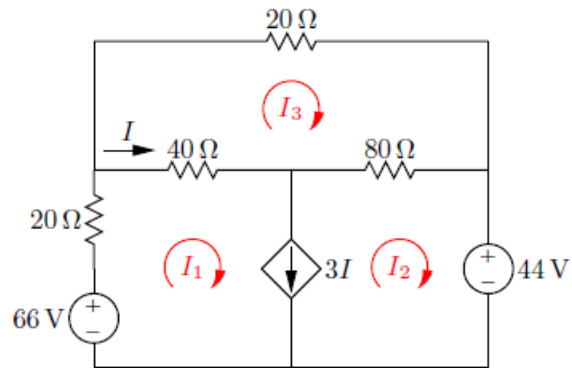


Figure 3.49