CSE250

ASSIGNMENT 1 (SUMMER 2023)

SECTION 05, 06, 22

Instructions

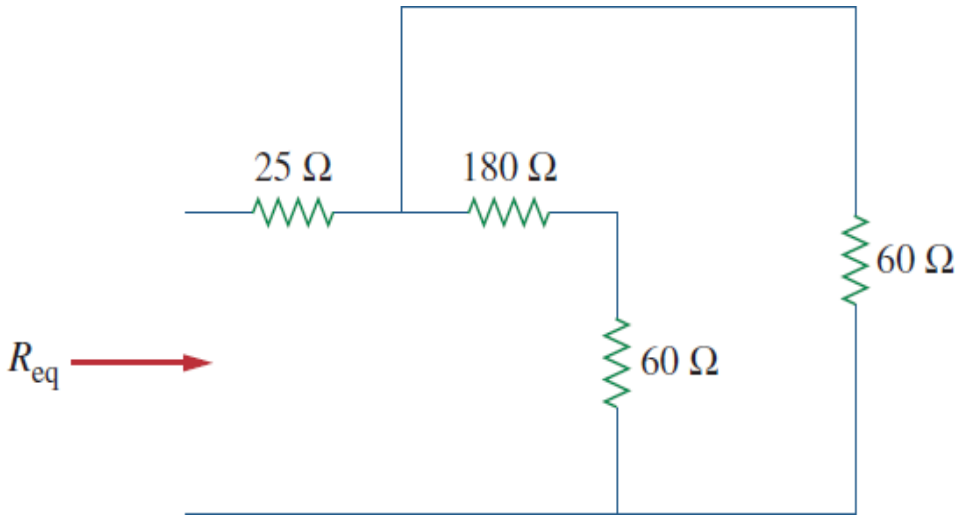
- There are **14 Questions** covering different topics in this assignment.
- Try to solve them and understand them properly.
- **Make a PDF file** containing all your answers and submit it **before 11:59 PM, 20th July, 2023**.
- Your Cover page must be **Handwritten** and should contain your **Name, ID, Course Code, Section, whom you are submitting to,** and **submission date**.
- The file naming convention is as follows: **NAME_ID_ASSIGNMENT_1_CSE250.pdf**.
- Also, **keep the hard copy**. We may need to submit that to the authority depending on the instructions.

Remember, if you can't solve or even attempt all the questions, **No Problem!** But you must try. Try to solve at least some questions from each topic. If you can't solve a question by yourself, discuss specific details in the **Queries** channel in Discord. Your classmates may help you and vice-versa. But don't give your answers to anybody directly. **Any kind of plagiarism will result in a harsh penalty. Good luck with your Exams!**

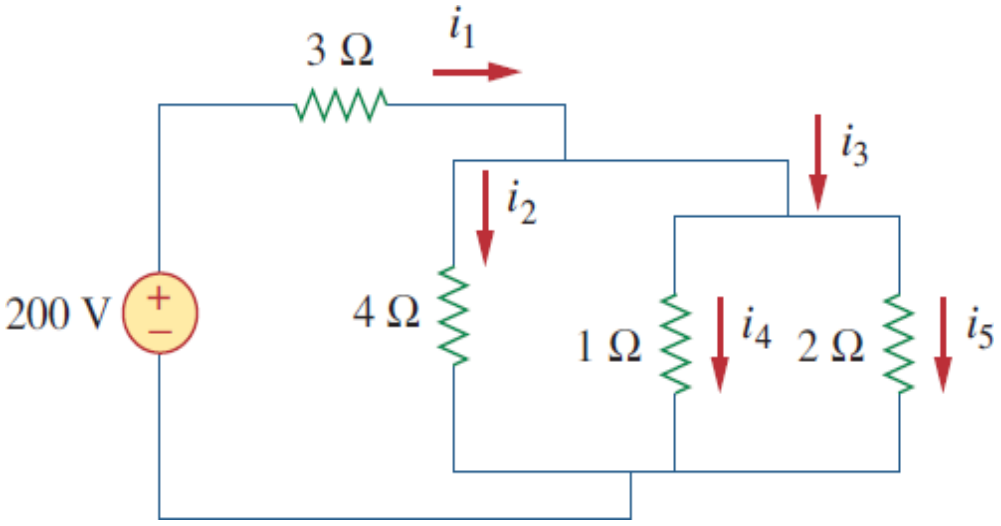
Questions

Series-Parallel

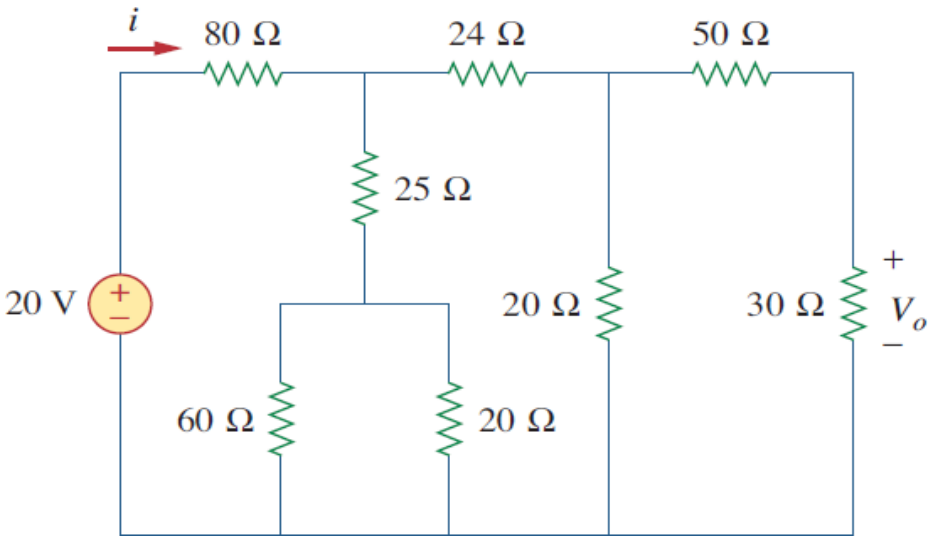
1. Find **Req** for the circuit given below:



2. For the circuit below, determine **i1** to **i5.**

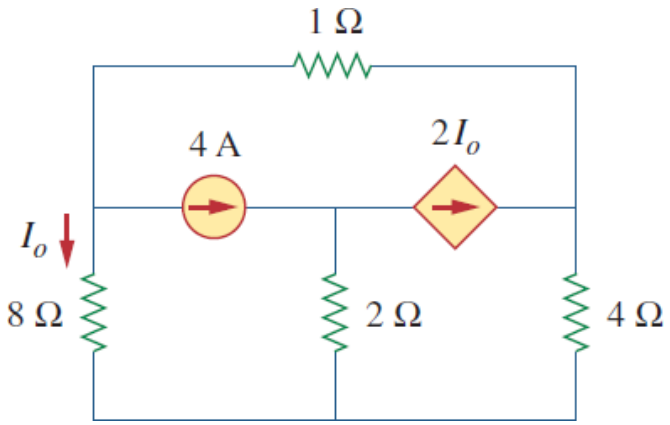


3. Find **i** and **Vo** in the circuit below:

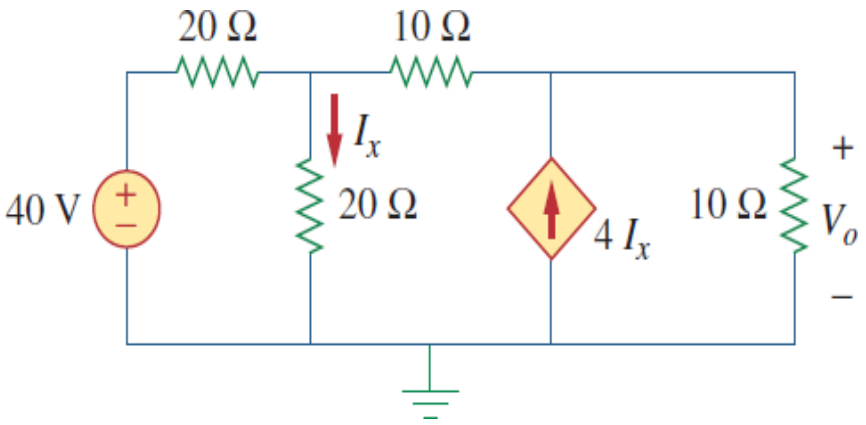


Nodal Analysis

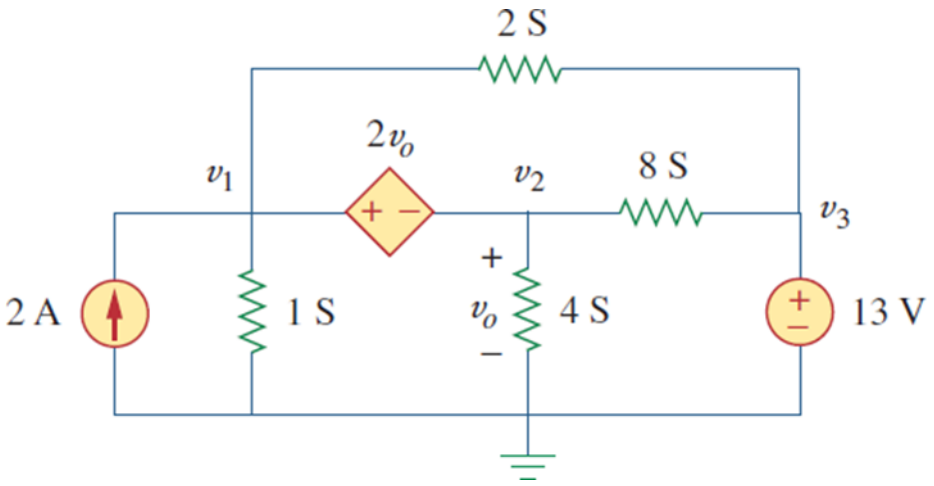
4. Find **Io** in the circuit shown below:



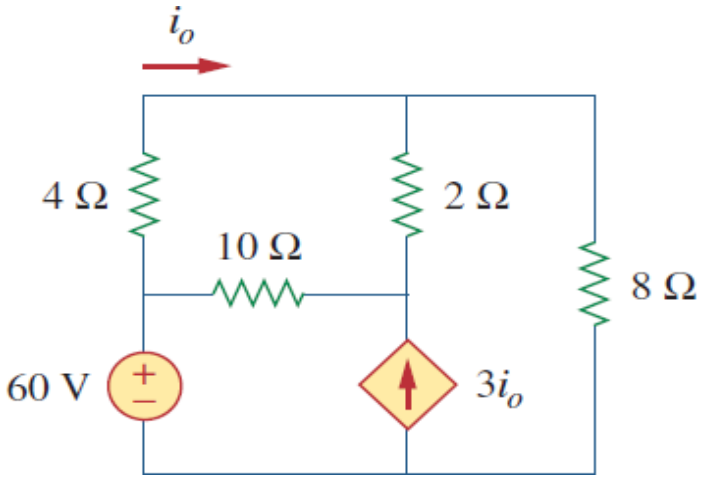
5. Using nodal analysis, determine **Vo** in the circuit below:



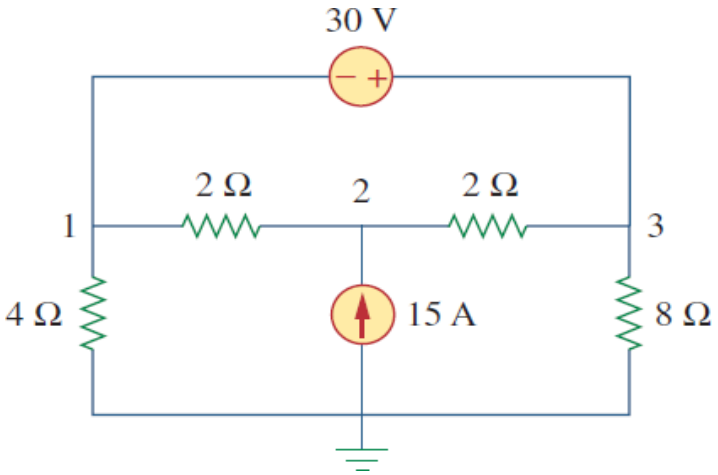
6. Determine voltages **v1 through v3** in the circuit shown below using nodal analysis. [Use **Ω** instead of **S**]



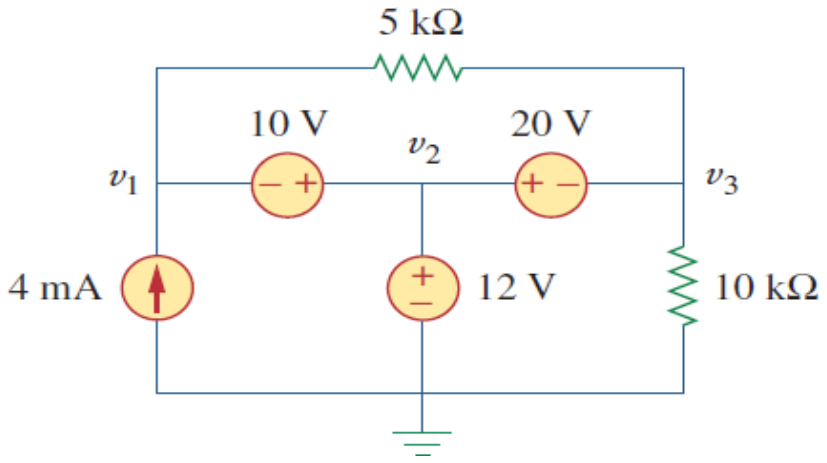
7. Using nodal analysis, find current **io** in the circuit given below:



8. Determine the node voltages in the circuit shown below using nodal analysis.

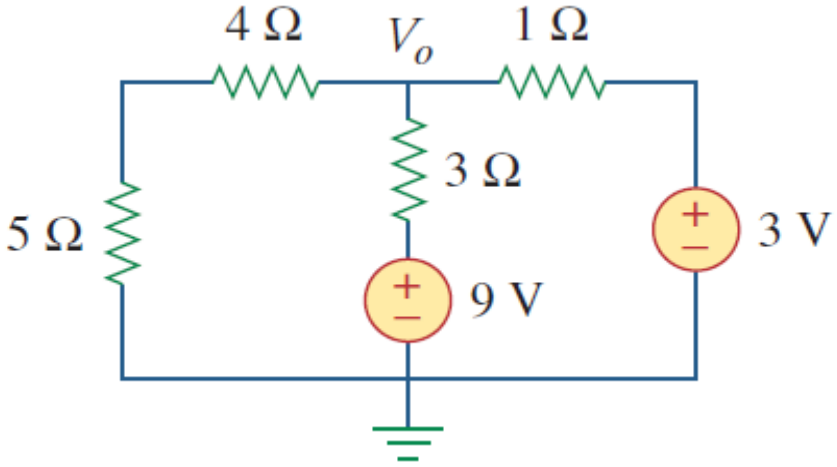


9. Obtain the node voltages from the circuit shown below:

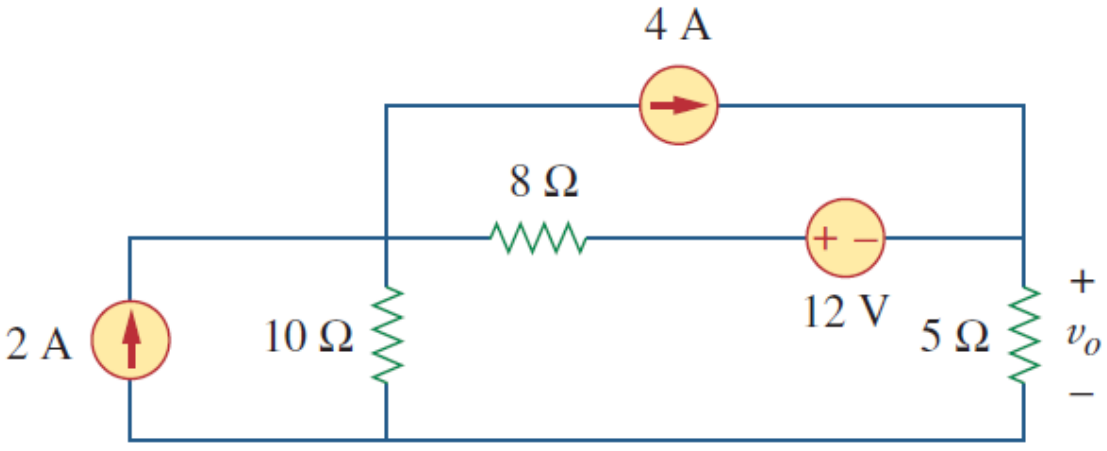


Superposition Principle

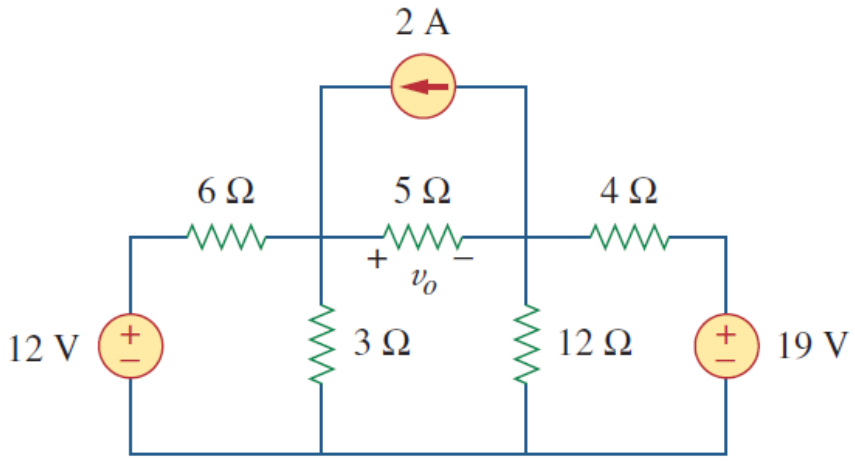
10. Find $\mathbf{V_0}$ using the Superposition Principle.



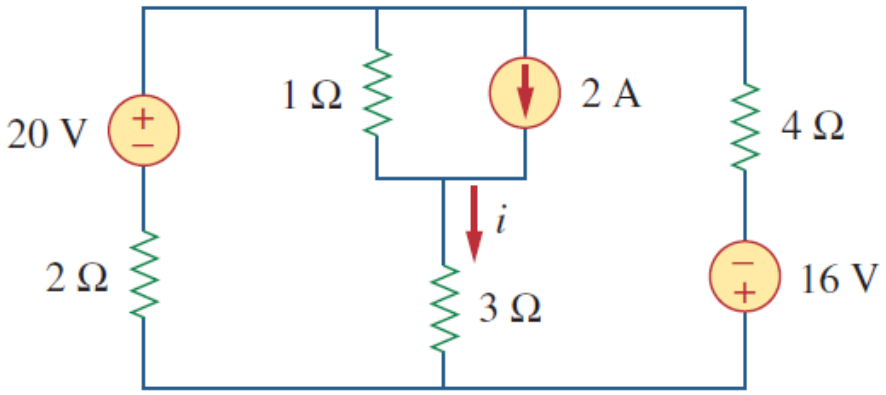
11. Find $\boldsymbol{V_o}$ using Superposition Principle.



12. Find v_o using Superposition Principle.



13. Find i using the Superposition Principle.



14. Find v_o and i_o using the Superposition Principle.