

Homework 1

Due date: Mar. 3rd, 2021, Wednesday

Turn in your homework in class

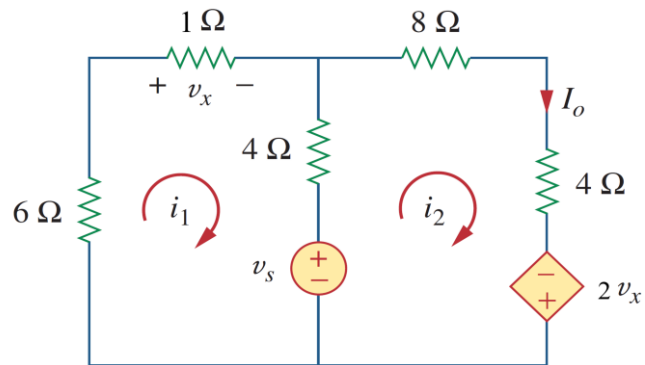
Rules:

- Work on your own. Discussion is permissible, but extremely similar submissions will be judged as plagiarism.
- Please show all intermediate steps: a correct solution without an explanation will get zero credit.
- Please submit on time. No late submission will be accepted.
- Please prepare your submission in English only. No Chinese submission will be accepted.

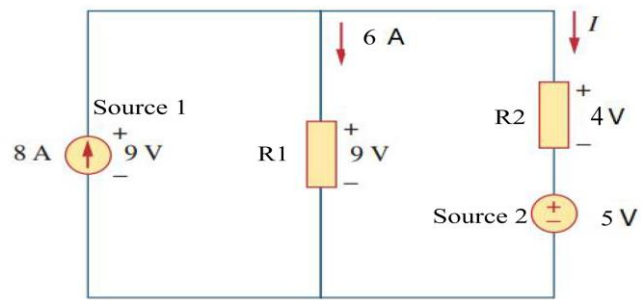
1、 For the circuit below,

(1) find I_o when $v_s = 6\text{V}$,

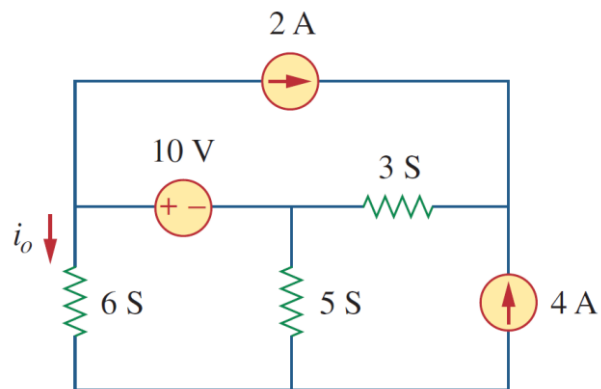
(2) find I_o when $v_s = 12\text{V}$.



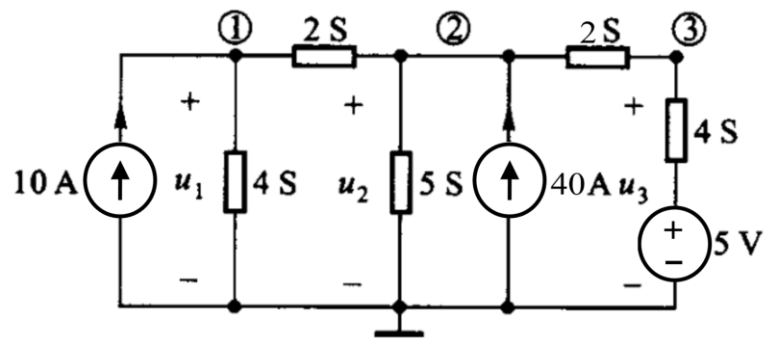
2、 Find I and the power absorbed by each element in the circuit below.



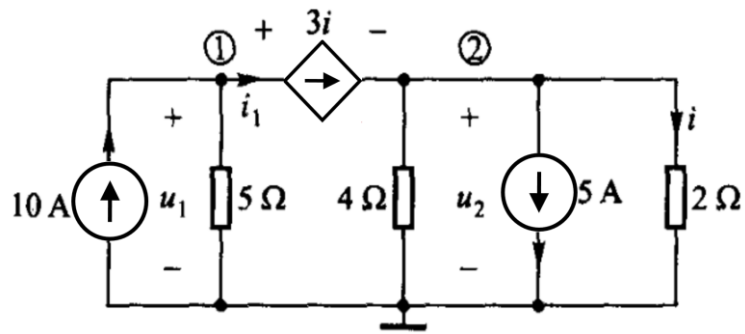
3、 Apply nodal analysis to find i_o and the power dissipated in each resistor in the circuit.



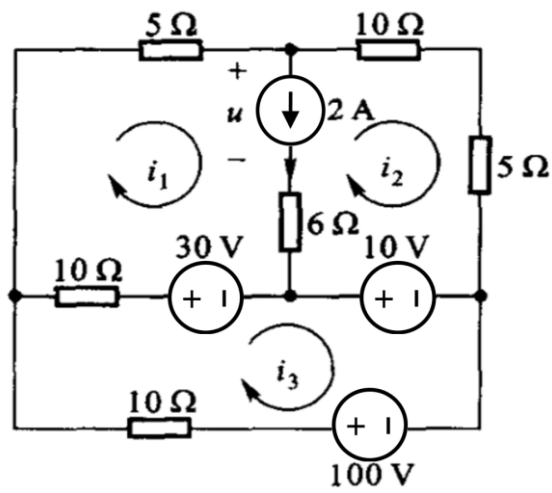
4、Apply nodal analysis to find u_1 , u_2 and u_3 .



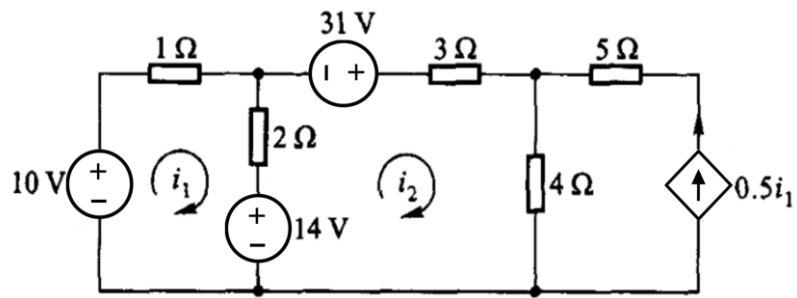
5、 Using nodal analysis, find u_1 and u_2 .



6、 Using mesh analysis, find i_1 , i_2 , i_3 and u .



7、 Using mesh analysis, find i_1 and i_2 .



8、 Using mesh analysis, find i_1 , i_2 , i_3 , i_4 and i_5 .

