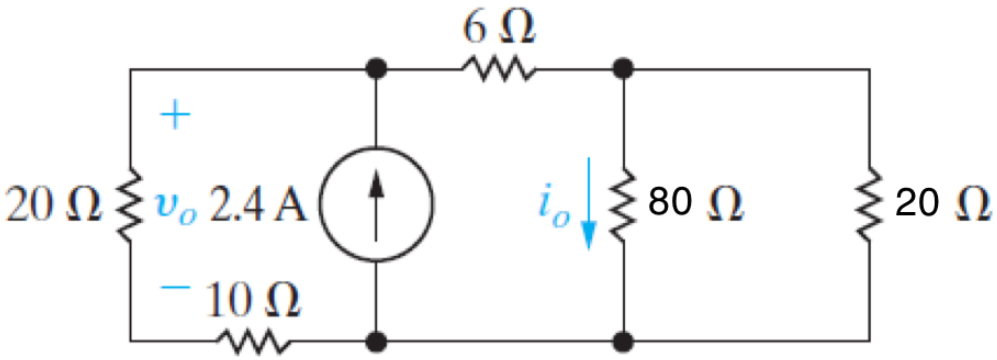
ENGR 2910-101: Circuit Analysis
Homework 6: 10/06/21

Instructor: Leo Silbert
Due: 10/13/21

Question 1 [10]

For the current-divider circuit shown here calculate:



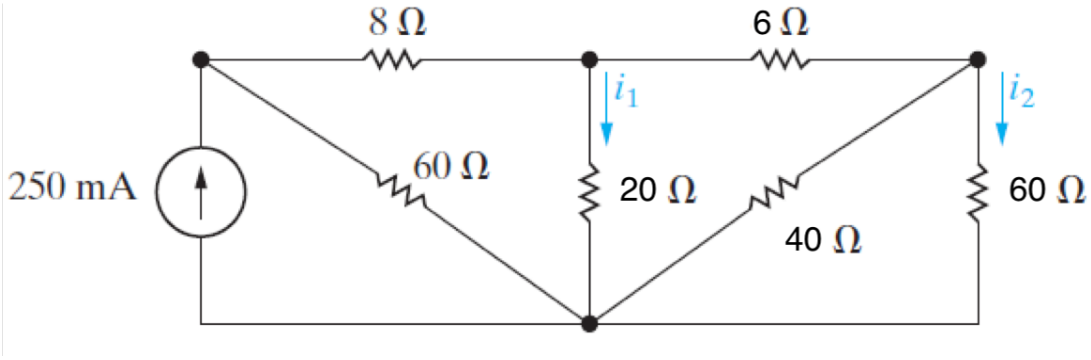
(i) i_o and v_o,

(ii) the power dissipated in the 6 Ω resistor,

(iii) the power delivered by the current source.

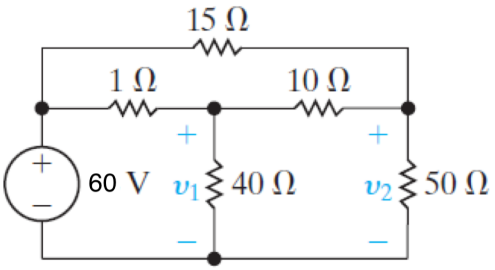
Question 2 [10]

For the circuit shown, calculate i_1 and i_2 using current-division.



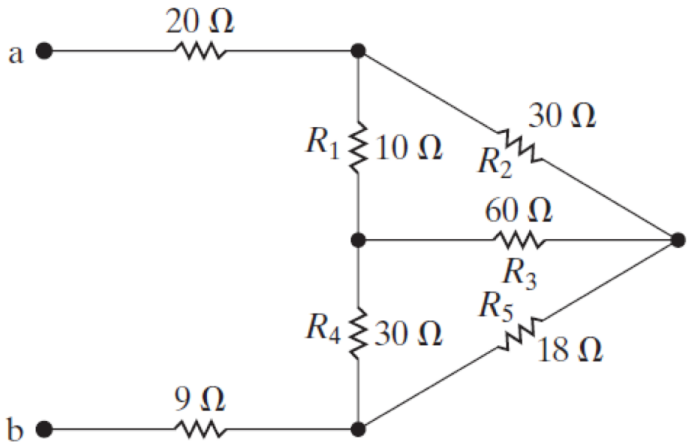
Question 3 [10]

Use a Δ-to-Y transformation to find the voltages v_1 and v_2 in the circuit below.



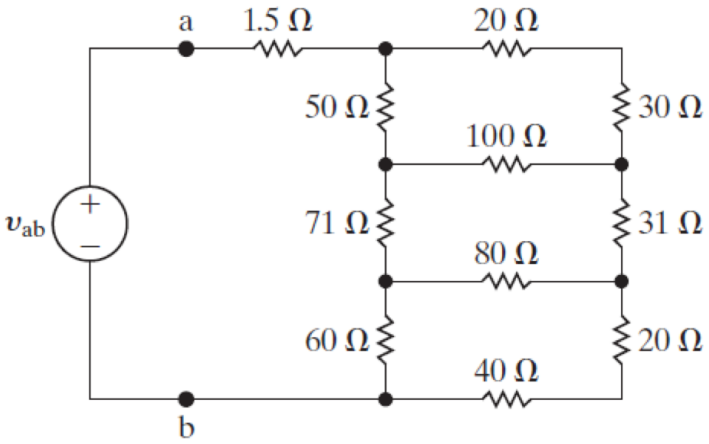
Question 4 [10]

Use a Y-to-Δ transformation to find the equivalent resistance R_{ab}.



Question 5 [10]

For the circuit circuit shown:



(a) Find the resistance seen by the ideal voltage source.

(b) If $v_{ab} = 250$ V, how much power is dissipated in the 31 Ω resistor?