Student's Name:

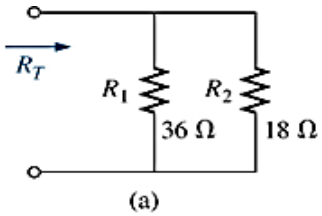
Introduction to circuit analysis

Homework 4 – Parallel dc circuit

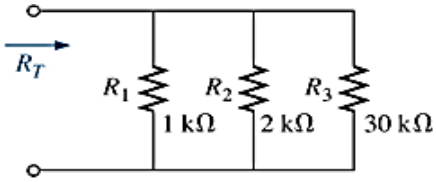
Instructions:

- You have to show all work in order to receive full credit
- All answer must be in engineering notation rounded off to the hundredth

1. Find the total resistance for each configuration parallel circuit (a = 8 pts, b = 10 pts)

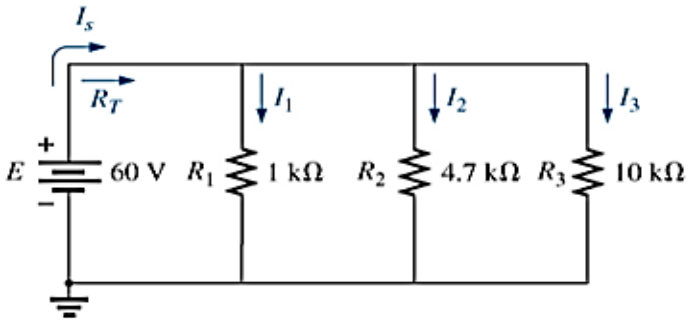


(a)



(b)

2. For the following parallel circuit



a. Find the total resistance and the current through each branch (10 pts)
b. Find the power delivered to each resistor (15 pts)
c. Calculate the power delivered by the source (5 pts)

3. Find the unknown quantities for the following parallel circuit, (8.5 points each)

a. I_{R1}, current through R1 _____

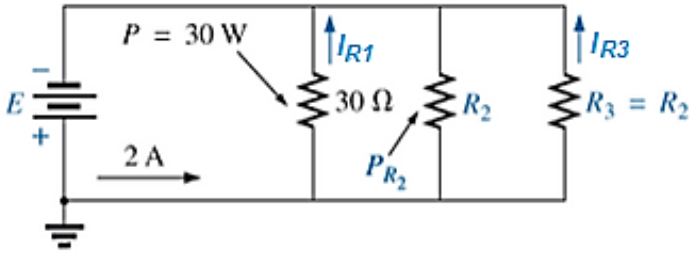
b. I_{R3}, current through R3_____

c. Resistance at R_2 _____

d. Resistance at R_3 _____

e. Power dissipation at R2,P_{R2} _____

f. Voltage source, E _____



----------HOMEWORK ENDS HERE ----------