

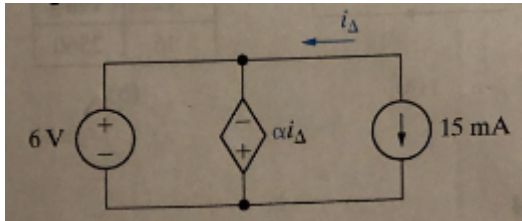
Assignment 2

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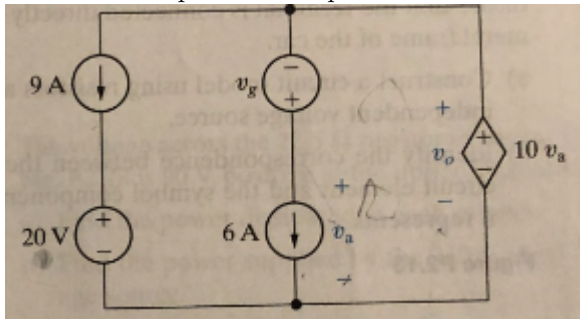
Chapter 2

6 Consider the interconnection shown in the figure below.

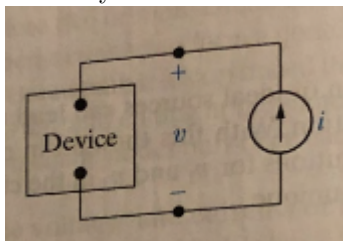


- a) What value of α is required to make this a valid interconnection?
- b) For this value of α , find the power associated with the current source.
- c) Is the current source supplying or absorbing power?

9 Find the total power developed in the circuit in the figure below if $v_o = 5\text{ V}$

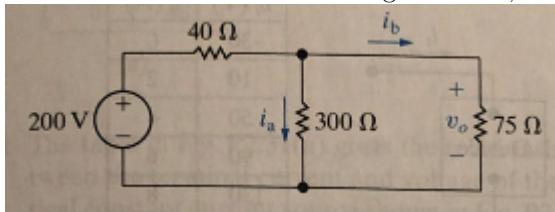


15 A variety of current source values were applied to the device shown in the figure below



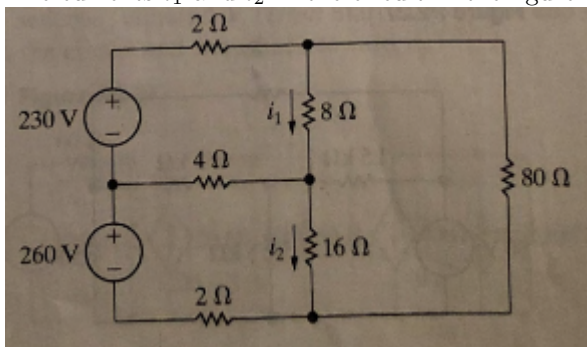
i mA	p mW
0.5	8.25
1.0	33.00
1.5	74.25
2.0	132.00
2.5	206.25
3.0	297.00

18 Given the circuit shown in the figure below, find



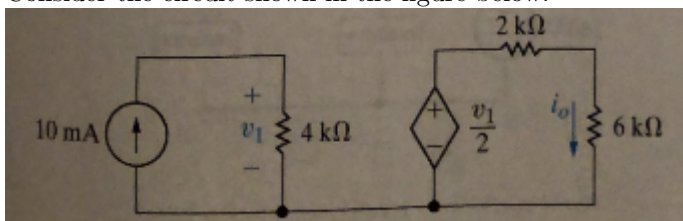
- the value of i_a
- the value of i_b
- the value of v_o
- the power dissipated in each resistor
- the power delivered by the 200 V source

24 The currents i_1 and i_2 in the circuit in the figure below are 20 A and 15 A, respectively



- Find the power supplied by each voltage source.
- Show that the total power supplied equals the total power dissipated in the resistors.

32 Consider the circuit shown in the figure below.



- Find i_o
- Verify the value of i_o by showing that the power generated in the circuit equals the power absorbed in the circuit.