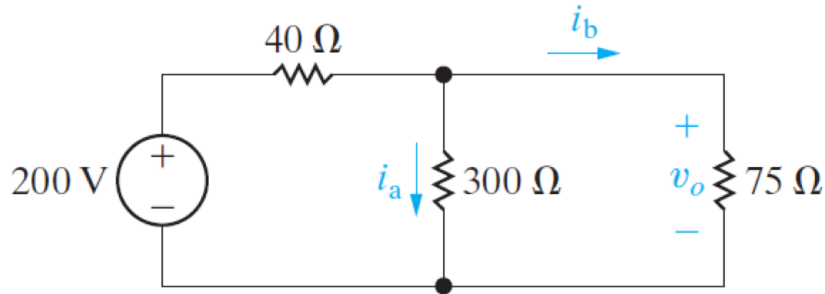


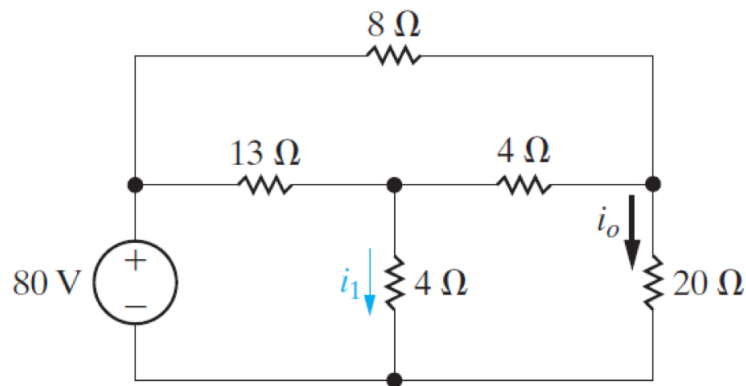
Question 1 [10]

For the circuit shown, find:

- (a) the value of i_a ,
- (b) the value of i_b ,
- (c) the value of v_o ,
- (d) the power dissipated in each resistor,
- (e) the power delivered by the 200 V source.

Question 2 [10]

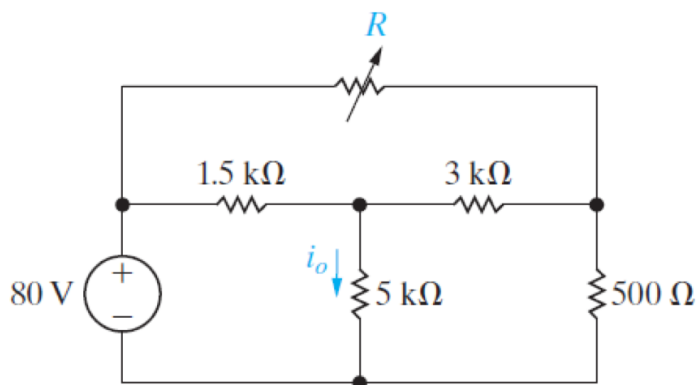
In the circuit below, the current $i_o = 2\text{ A}$.



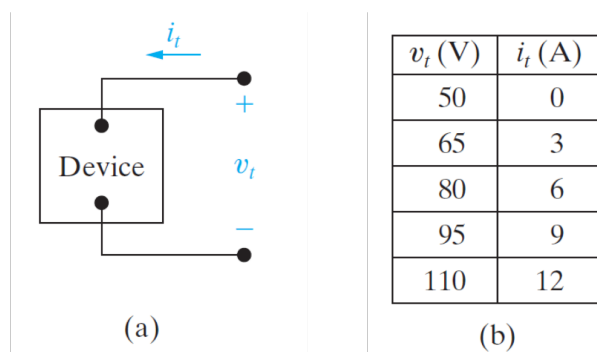
- (a) Find i_1 .
- (b) Find the power dissipated in each resistor.
- (c) Verify that the total power dissipated in the circuit equals the power provided by the voltage source.

Question 3 [10]

The variable resistor R is adjusted until $i_o = 10$ mA. Find the value of R .

**Question 4** [10]

The voltage and current were measured at the terminals of the device shown.



- Construct a circuit model for this device using an ideal current source in parallel with a resistor by plotting the data.
- Use the model to predict the amount of power the device will deliver to a 20Ω resistor.

Question 5 [10]

Find v_o and the total power supplied in the circuit.

