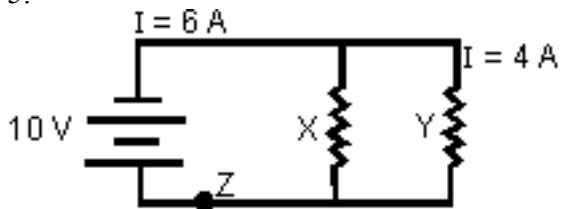


Electric Circuits Model: Review Sheet

1. Do light bulbs use up charge? Describe an experiment that supports your answer.
2. Do batteries run out of charge or out of energy? How do you know?
3. How are current and total resistance affected when additional pathways (containing resistors) are added to a circuit?
4. How are current and total resistance affected when more resistors are added to existing pathways in a circuit?

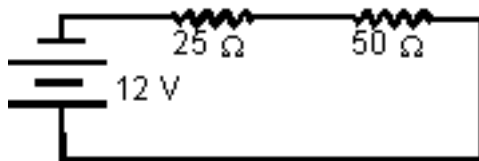
5.



- a. How much current is flowing through resistor X?
- b. What is the voltage drop across resistor X?
- c. What is the resistance of resistor X?

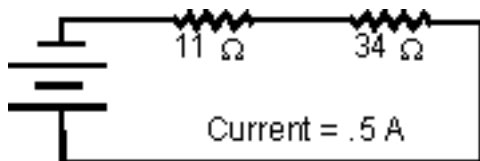
- d. How much current flows through point Z?
- e. How many coulombs of charge flow through resistor Y each second?
- f. Find the rate of energy transfer to resistor Y.

6.



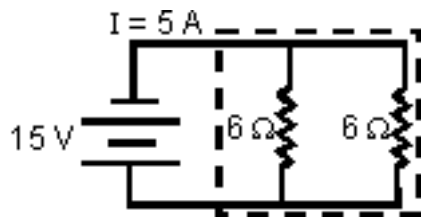
- a. Find the total resistance of the circuit.
- b. Find the current flowing in the circuit.
- c. Find the voltage drop across each resistor.

7.



- a. Find the total resistance of the circuit above.
- b. Find the battery voltage.
- c. Find the voltage drop across each resistor.

8.

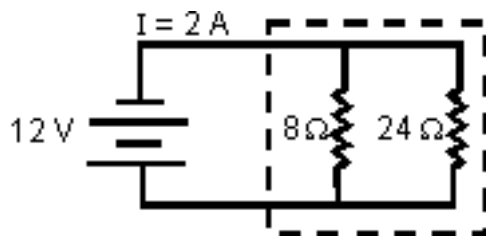


a. Find the resistance of the portion of the circuit in the dashed box above.

b. Find the current through each resistor.

c. What is the rate of energy transfer (power) to each resistor?

9.



a. Find the resistance of the portion of the circuit in the dashed box above.

b. Find the current through each resistor.

c. What is the rate of energy transfer (power) to each resistor?