

Section 9-3

Series and Parallel Circuits



Series and Parallel Circuits

Work with a partner and discuss the following questions:

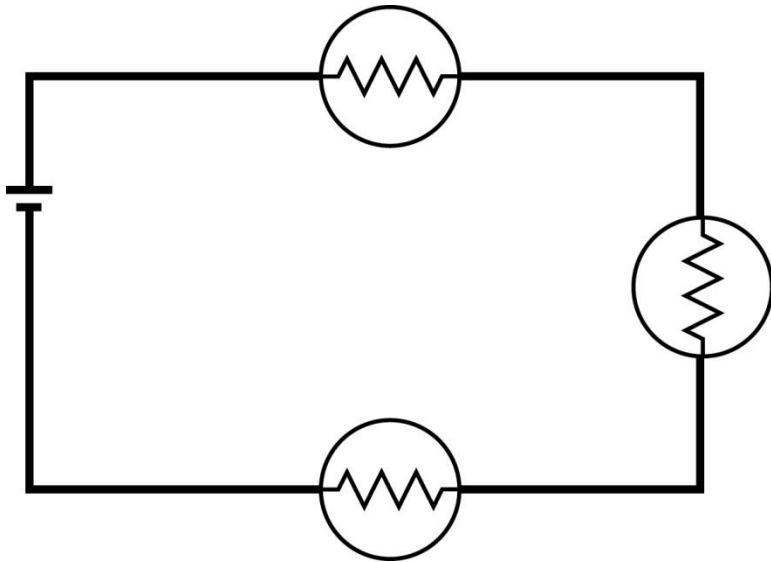
- What would happen to a lamp in a room if the fuse blew?
- What would happen to all the lamps in a room if the fuse blew?
- Draw a conclusion about the circuits in a lamp versus the circuits in a room?

Write down your conclusion.

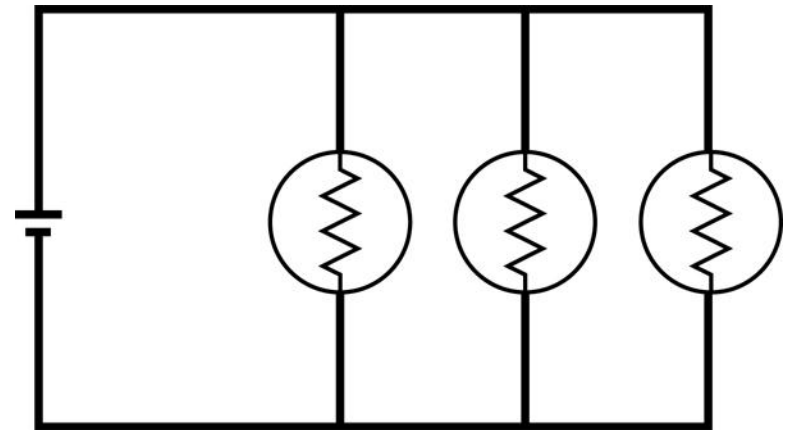


Series and Parallel Circuits

Series Circuit



Parallel Circuit



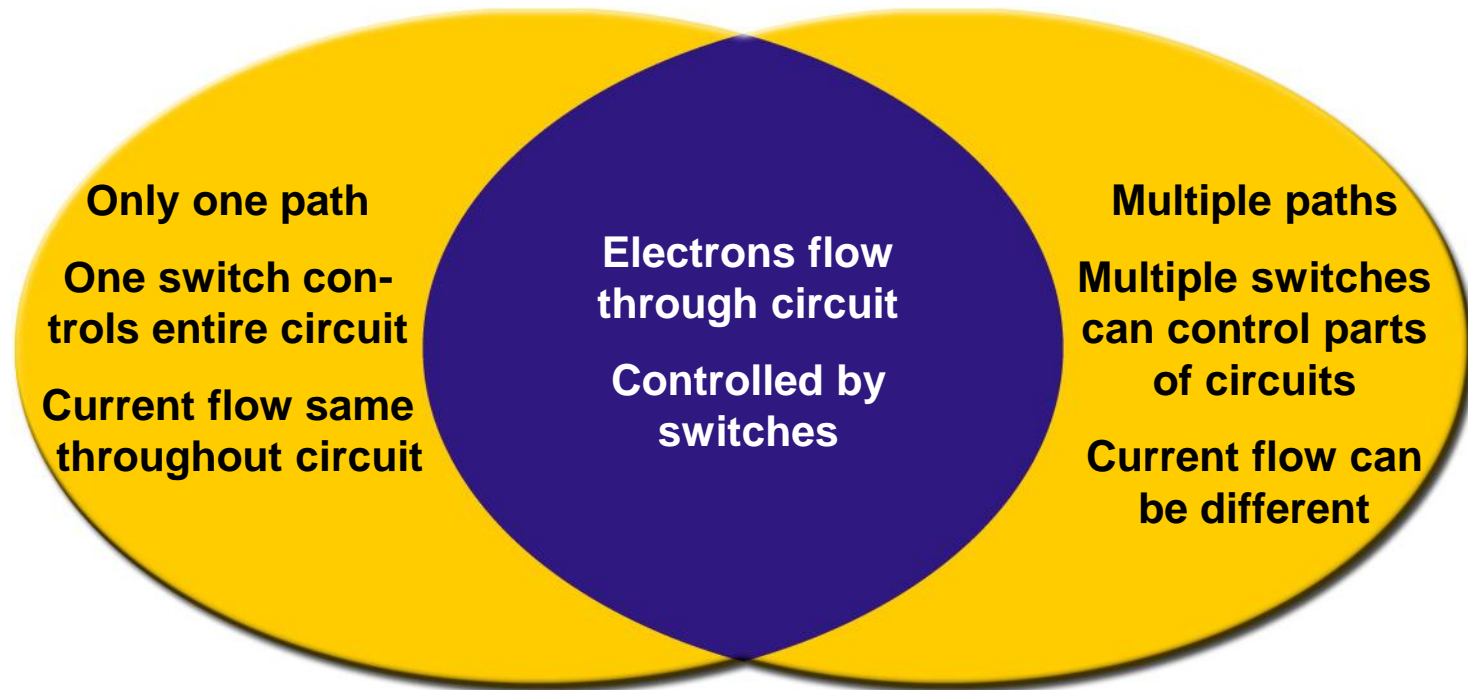
Series and Parallel Circuits



Series and Parallel Circuits

Series Circuits

Parallel Circuits



Section 9-4

Electrical Safety



Short Circuit:

A connection that allows current to take an unintended path. (a *short cut*)

Grounding:

An additional wire that gives current a path to the Earth rather than through a person.

Lightning Rod:

a metal rod connected to a grounding wire. ([picture](#))



Fuse:

A device that contains a thin strip of metal that will melt if too much current flows through it. (Demo)

Circuit Breaker:

A device that uses an electromagnet to shut off the circuit when the current gets too high. (Demo)



The severity of an electric shock depends on the current.

0.01 amp – almost unnoticeable

between 0.1 and 0.2 amp – irregular heartbeat and
can disrupt blood flow

greater than 0.2 – can cause burns and
can stop your heart

