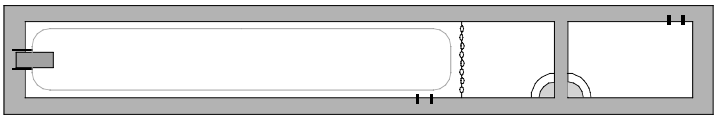
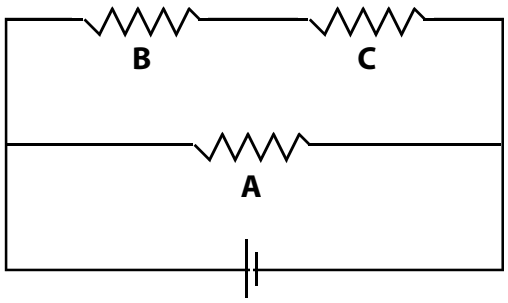
PhyzSpringboard:
Beyond a Slippery Affair



Compound Circuits

Consider the compound circuits given below. Assume each is made with three identical resistors. If the resistors were bulbs, indicate what would happen when certain bulbs were removed from their sockets (or burned out). Indicate the relationships in the size of the current in each resistor, the voltage drop across each resistor, and the power dissipated in each resistor.

1. One in Parallel With Two in Series



a. If bulb A goes out,

b. If bulb B goes out,

c. If bulb C goes out,

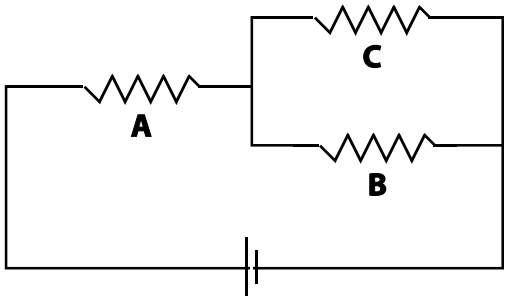
d. If bulbs A and B go out,

e. If bulbs B and C go out,

f. Insert symbols of equality or inequality

I_A	I_B	I_C
V_A	V_B	V_C
P_A	P_B	P_C

2. One in Series With Two in Parallel



a. If bulb A goes out,

b. If bulb B goes out,

c. If bulb C goes out,

d. If bulbs A and B go out,

e. If bulbs B and C go out,

f. Insert symbols of equality or inequality

I_A	I_B	I_C
V_A	V_B	V_C
P_A	P_B	P_C

Hey! Whad'ya lookin' at? There's nothing to see back here; please go back to the front.