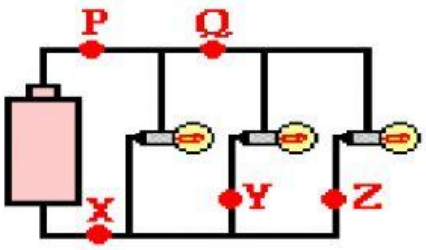
Check Your Understanding

1. As more and more resistors are added in parallel to a circuit, the equivalent resistance of the circuit _____ (increases, decreases) and the total current of the circuit _____ (increases, decreases).

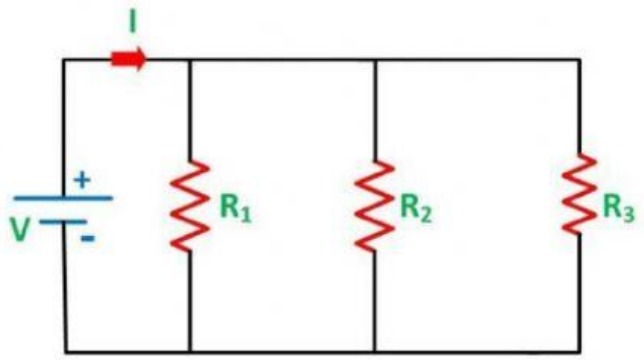
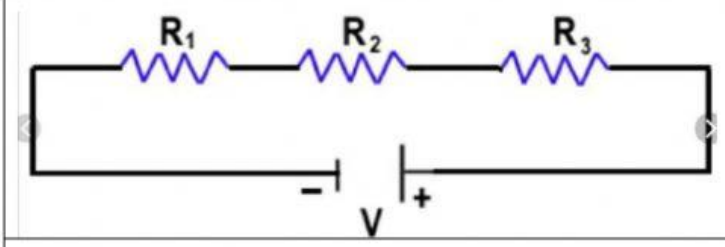
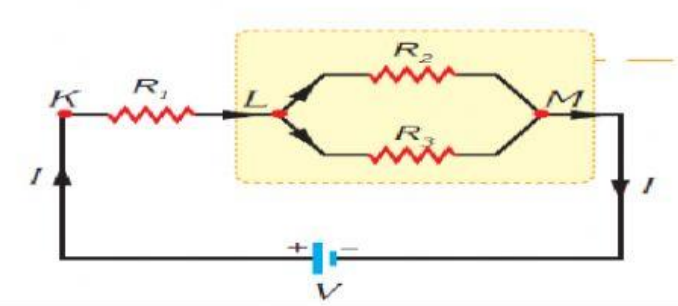
2.



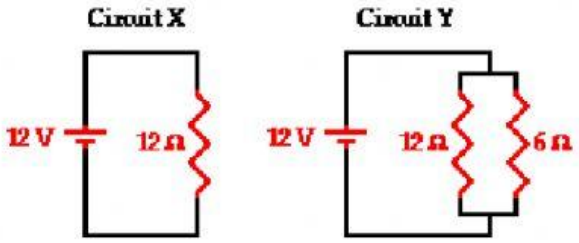
Three identical light bulbs are connected to a D-cell as shown below. P, Q, X, Y and Z represent locations along the circuit. Which one of the following statements is true?

a. The current at Y is greater than the current at Q.	
b. The current at Y is greater than the current at P.	
c. The current at Y is greater than the current at Z.	
d. The current at P is greater than the current at Q.	
e. The current at Q is greater than the current at P.	
f. The current is the same at all locations.	

3. Matching:

		**Complex combinations of resistors**
		**Parallel connection**
		**Series connection**

4. A 12-V battery and a 12-ohm resistor are connected as shown in circuit. A 6-ohm resistor is added to the 12-ohm resistor to create circuit Y as shown. The voltage drop across the 6-ohm resistor in circuit Y is _____ that across the resistor in X.



a. larger than

b. smaller than

c. the same as