Circuits –Test Review

1. Compare the resistance of branch 1 with that of branch 2. A branch is a section of a circuit. The resistance of branch 1 is _____ branch 2.

(A) Four times

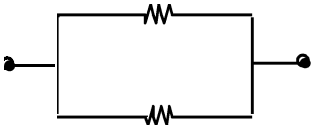
(B) Double

(C) The same as

(D) Half

(E) One quarter (1/4)

Branch 1



Branch 2

2. Compare the brightness of bulb A with bulb B. Bulb A is _____ bright as bulb B.

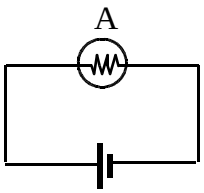
(A) One fourth (1/4) as

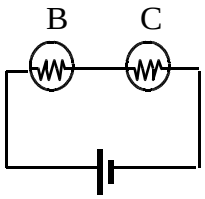
(B) Half as

(C) Equally

(D) Twice as

(E) Four times as





3. What happens to the potential difference (ΔV) between points 1 and 2 when the switch is closed?

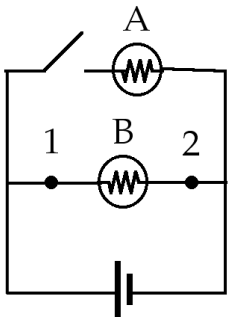
(A) Quadruples (4 times)

(B) Doubles

(C) Stays the same

(D) Reduces by half

(E) Reduces by one quarter (1/4)



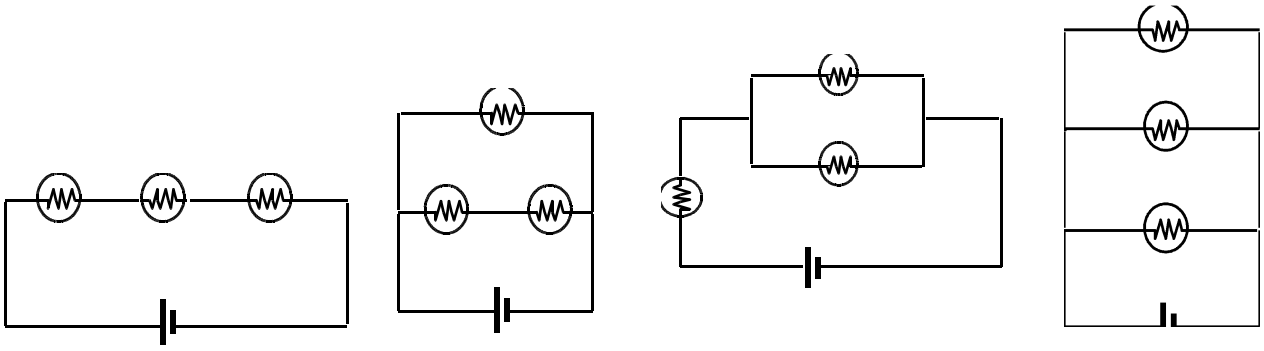
4. Arrange the schematic diagrams below in order of increasing equivalent resistance.

(A) 1, 2, 3, 4

(B) 4, 3, 2, 1

(C) 4, 2, 3, 1

(D) 1, 3, 2, 4



Circuit 1 Circuit 2 Circuit 3 Circuit 4

5. What happens to the brightness of the bulbs when the switch is **opened**?

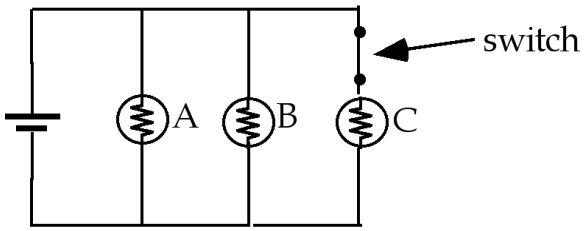
(A) all 3 bulbs go out

(B) A and B get dimmer, C goes out

(C) A and B get brighter, C goes out

(D) A and B remain the same, C goes out

(E) A is brighter than B, C goes out



6. Compare the brightness of bulb A with bulb B. Bulb A is _____ bright as Bulb B.

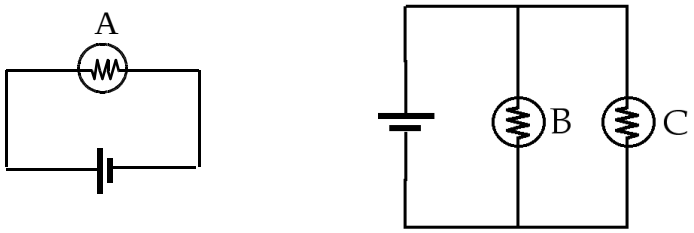
(A) Four times as

(B) Twice as

(C) Equally as

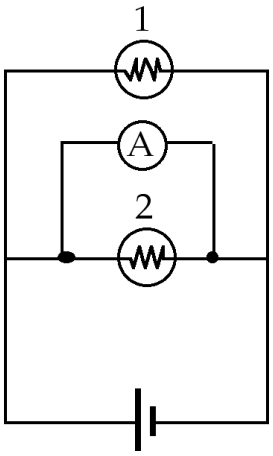
(D) Half as

(E) One fourth (1/4) as

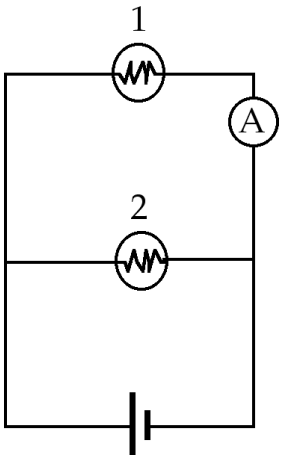


7. Which diagram shows the proper placement of an ammeter to measure the current through bulb 2?

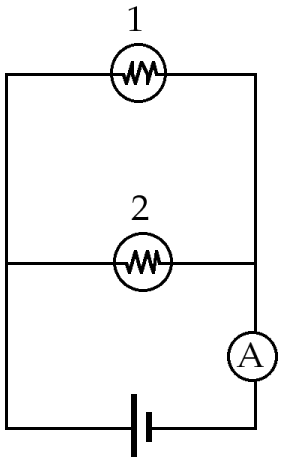
A)



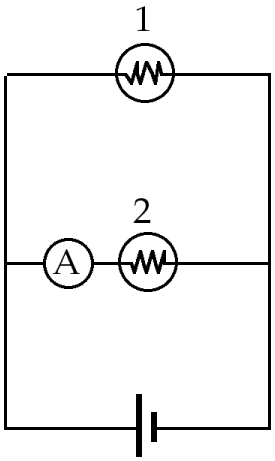
B)



C)

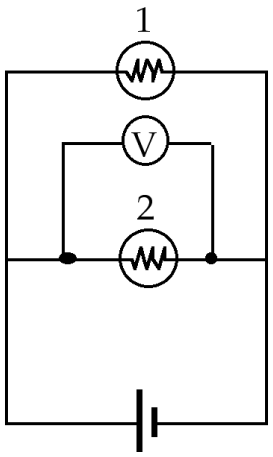


D)

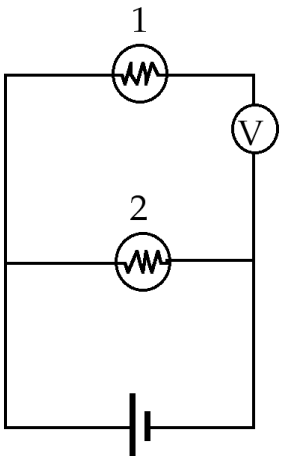


8. Which diagram shows the proper placement of a voltmeter to measure the potential drop across bulb 2?

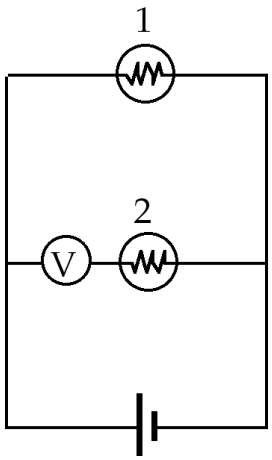
A)



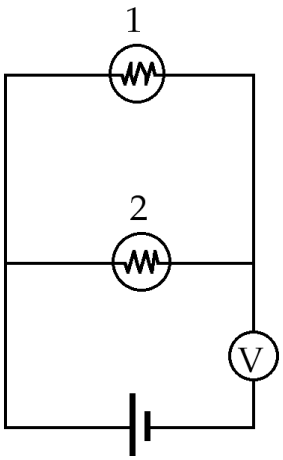
B)

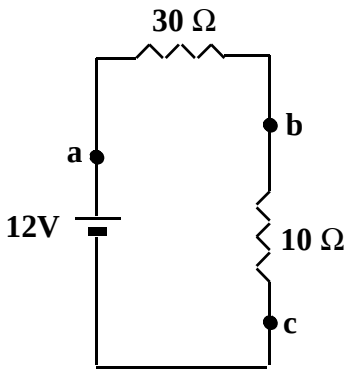


C)



D)





9. Consider the circuit at right. Determine

a. the potential drop from a to b.

b. the current flowing through point c.

c. the power dissipated by the 10 Ω resistor.