

9. In the circuit shown, the switch is open at first, so the nichrome wire is not in the circuit. The resistance of the wire is comparable to that of a light bulb.

(a) When the switch is closed, what happens to the brightness of each bulb, *A* and *B*?  
(You may simply circle the answer in each case.)

*A*: brighter, dimmer, stays the same?

*B*: brighter, dimmer, stays the same?

(b) Suppose we now make the nichrome wire longer. How does the brightness of each bulb change when this is done?

*A*: brighter, dimmer, stays the same?

*B*: brighter, dimmer, stays the same?

