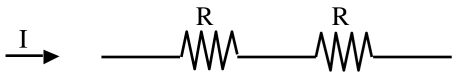
Two identical resistors are wired in series (one after the other).



If an electric current enters at the left, the current through the *2nd* resistor is

A: Equal to B: Half

C: Smaller than, (but not necessarily ½)

.... the current through the first resistor.

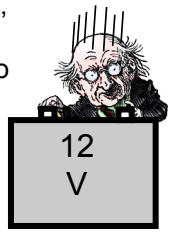
Your (slightly crazed) physics professor wants to grab both poles of a regular 12 V car battery. What happens?

A: STOP! Don't let him do it, certain death!

B: Warning! (This is going to hurt a little.)

C: Let him go for it. (He won't notice a thing...)

D) I abstain from voting

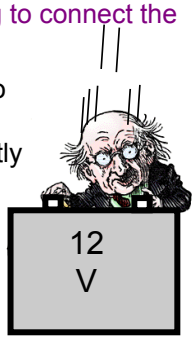


What if he says he's going to connect the poles with a screwdriver?

A: STOP! Don't let him do it, very bad idea!

B: Warning! (This is slightly risky)

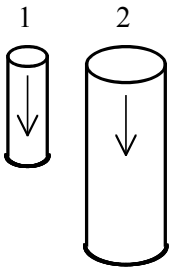
C: Let him go for it.



Two cylindrical resistors are made of the same material (same resistivity ρ).

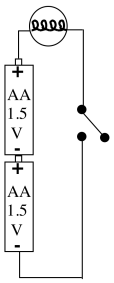
Resistor 2 is twice as long and has twice the diameter of resistor 1. What is the ratio R2/R1?

A) 2 B) 4
C) 1/2 D) 1/4
E) 1



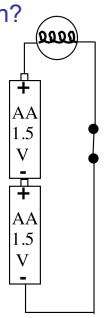
A flashlight requires 2 AA (1.5V) batteries, and is arranged as shown. The bulb…

A: has 1.5 V across it, & glows
B: has 3 V across it, & glows
C: has 3 V across it, & is dark
D: has 0 V across it, & is dark
E: has 0 V across it, &glows



What about when I close the switch? Now the bulb…

A: has 1.5 V across it, & glows
B: has 3 V across it, & glows
C: has 3 V across it, & is dark
D: has 0 V across it, & is dark
E: has 0 V across it, &glows

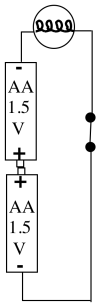


First we had 1.5 V across that bulb, later we put 3 V across the SAME bulb. What happened to the POWER dissipated by the bulb?

A) Stayed the same
B) Doubled
C) Quadrupled
D) Not sure/something else

What if I reverse one battery?
Now the bulb…

A: has 1.5 V across it, & glows
B: has 3 V across it, & glows
C: has 3 V across it, & is dark
D: has 0 V across it, & is dark
E: has 0 V across it, &glows



Which bulb is brighter?

A: A is brighter
B: A is is ON,
B is brighter
C: A is OFF,
B is brighter
D: Equal