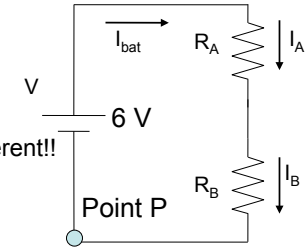
If we consider the Voltage change starting at Point P and going all the way around the circuit loop back to Point P, what is the grand total ΔV?

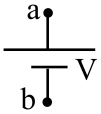
A. ΔV = +6.0 Volts
B. ΔV = +12 Volts
C. ΔV = +18 Volts
D. ΔV = 0.0 Volts
E. Something different!!



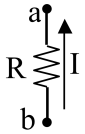
As you walk past the two circuit elements shown, moving *FROM* a *TO* b, what is ΔV in each situation?

	Situation #1	Situation #2
A)	+V,	+I R
B)	-V,	+IR
C)	+V,	-IR
D)	-V,	-IR

Situation #1

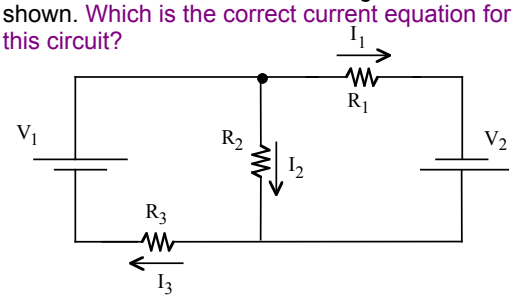


Situation #2



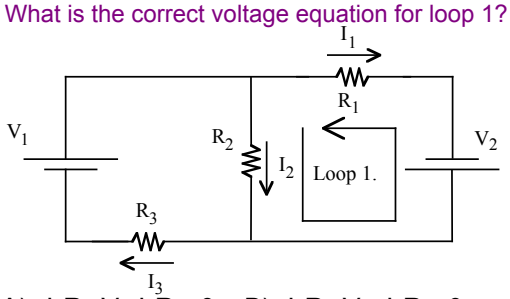
You walk this way, a to b

The current directions have been *guessed* as shown. Which is the correct current equation for this circuit?

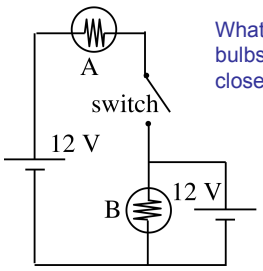


A) I2=I1+I3 B) I1 = I2+I3 C) I3 = I1+I2

What is the correct voltage equation for loop 1?



A) $-I_2R_2-V_2-I_1R_1=0$ B) $-I_2R_2-V_2+I_1R_1=0$
C) $+I_2R_2+V_2-I_1R_1=0$ D) $+I_2R_2+V_2+I_1R_1=0$



What happens to the (identical) bulbs when the switch is closed?

A: A stays same, B changes
B: A stays same, B stays same

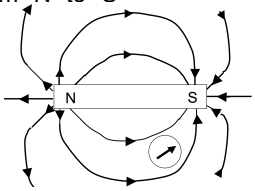
C: A changes, B changes
D: A changes, B stays same

Facts about bar magnets:

1) North poles attract to South poles (opposites attract)

2) B field lines point from "N" to "S"

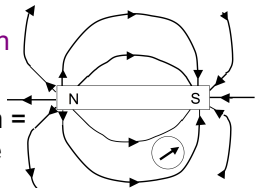
3) Compass needles are little magnets. (They point in the *same* direction as **B**-field**)**



The arrow (tip) of the compass needle must be… A: North B: South

Compass needles point roughly towards the earth's geographic North Pole. Earth can be viewed as having a giant dipole magnet embedded in it

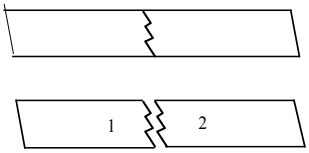
From this, which can you conclude?…



A: Geographic North = magnetic North Pole of earth

B: Geographic North = magnetic South Pole of earth

A permanent bar magnet is broken in half. Do the pieces attract or repel?

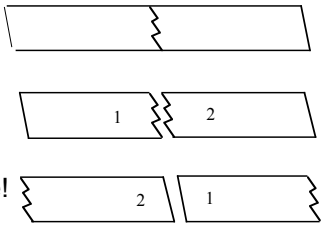


A: Attract

B: Repel

C: Neither, no net force!

A permanent bar magnet is broken in half. The two pieces are interchanged, keeping their orientations fixed, as shown below.
Do the pieces attract or repel?



A: Attract

B: Repel

C: Neither, no net force!