1. Voltage D	A. Units for voltage.
2. Current F	B. Restricts electricity flowing in a circuit.
3. Resistance B	C. Units for current.
4. Amps C	D. Pushes electrons thru a circuit.
5. Ohms (Ω) E	E. Units for Resistance.
6. Volts A	F. Amount of electricity flowing in a circuit.

Which has more current flowing thru it?

A loud radio or a quiet radio?

A dim light bulb or a bright light bulb?

A fast toy car or a slow toy car?

A cold wire or a hot wire?

Voltage (V), Current (I), or Resistance (R)?

A. I If you increase resistance what decreases?

B. I If you increases voltage what increases?

C. R If the current decreased what increased?

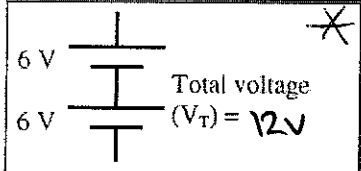
D. V If current increased what increased?

E. R If current increased what decreased?

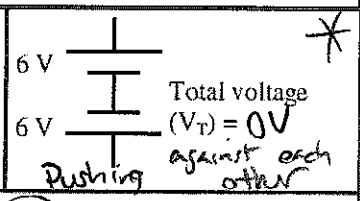
F. I If resistance is decreased, what increases?

G. V, I More batteries will increase these two quantities.

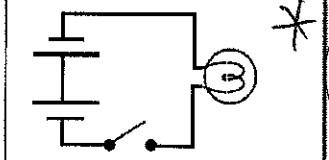
$I = \frac{V}{R}$



Total voltage (V_T) = 12V



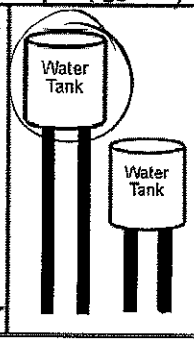
Total voltage (V_T) = 0V against each other



When the switch is closed will the light turn on? No

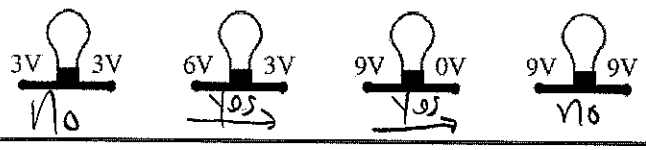
Why or why not?

Batteries are opposing each other



Which of these two water towers would give the most voltage to a water circuit?

Which light bulbs will light? (All are in closed circuits.)
If it does light, draw an arrow to show the direction of current.



With the same resistance, which battery will cause more current to flow: a 12V or a 24V battery?

Voltage give what kind of energy to electricity?

PE

How much potential energy does water have after it falls to the ground?

0J

How much voltage does a circuit have just before going back thru the batteries?

0J

Voltage (V), Current (I), or Resistance (R)?

A) I	Flowing electrons.	H) R	Restricts the flow of current.
B) V	Pushes electricity in circuits.	I) V	Does work in an electric circuit.
C) V	Like a water pump.	J) V	Gives electric energy.
D) R	Measured in Ohms.	K) R	12 ohms
E) I	Measured in Amps.	L) V	36 volts.
F) V	A battery gives this.	M) I	5 amps.
G) V	Measured in volts.		

Which will have more resistance: an insulator or a conductor?

Which resistor is the better conductor: 150Ω or 600Ω?

Which resistor is the better insulator: 24Ω or 6Ω?

How much current does a 9V battery push thru a 3Ω resistor?

Given	Equation	Rearrange	Calculate
I = ? V = 9V R = 3Ω	$I = \frac{V}{R}$	\	$I = \frac{9V}{3\Omega} = 3A$

A 4 Ω resistor has 3A running thru it. Find the battery's voltage.

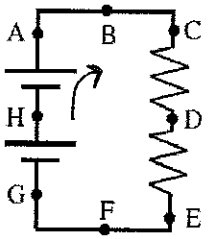
Given	Equation	Rearrange	Calculate
I = 3A V = ? R = 4Ω	$I = \frac{V}{R}$	$V = I \cdot R$	$V = 3A \cdot 4\Omega = 12V$

An 18V battery produces 2A in the circuit. How much resistance is in the circuit?

Given	Equation	Rearrange	Calculate
I = 3A V = 18V R = ?	$I = \frac{V}{R}$	$R = \frac{V}{I}$	$R = \frac{18V}{3A} = 5\Omega$

Add (A) or reduce (R) voltage?

Resistors? R Wires? no change Batteries? A



High, Medium, or Low voltage?

Point A H	Point E L
Point D M	Point H M
Point F L	Point B H
Point C H	Point G L

A bird lands on a 20,000 volt wire. Both feet are touching.

A) What voltage is the bird's left foot? 20,000V

B) What voltage is the bird's right foot? 20,000V

C) What is the *difference of voltage* between the bird's feet?

0V

D) So, why can a bird land on an electrical wire and not get electrocuted? no voltage difference between birds feet