- F 1. Series
- A. The voltage across any wire.
- 2. Short Circuit
- 3. Parallel D
- 4. Branch D
- 5. Junction (
- 6. Zero

- B. A circuit with multiple paths for current
- C. Where current splits or joins.
- D. An independent path for electricity in a parallel circuit.
- E. When a wire by-passes a part of a circuit.
- F. A circuit with only one path for the electricity.

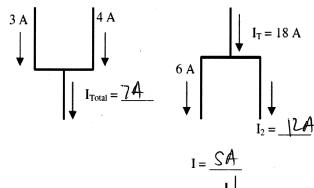
- 1. R. C
- Voltage between A and B.
- 2. V<sub>T</sub> B
- B. The total voltage in the circuit.
- 3. I<sub>T</sub> €
- C. The resistance of resistor 1.
- 4. V<sub>2</sub> F
- D. The current in branch 2 of the circuit.
- 5. I<sub>2</sub> D
- Total current in the circuit.
- 6. R<sub>T</sub> 6
- The voltage of battery 2.
- 7.  $V_{AB}$
- G. The total resistance of the circuit.

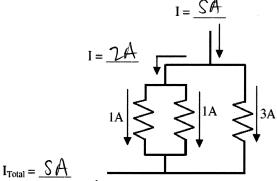
## Series or Parallel Circuit?

- S Only one path for the electricity to flow.
- $\mathcal{S}$  Paths are dependent on each other (one affects the other).
- $\overline{Y}$  How your house is wired.
- Paths are independent of each other.
- P If one light turns off, the others stay on.
- S If you turn off one light, all the lights turn off.
- $\frac{?}{?}$  Has more than one path for the electricity to flow.
- S Two devices have the same current.
- P Two devices have the same voltage.

## Understanding current.

Fill in the missing information on the following graphics.





Which resistor will have more current running thru SI

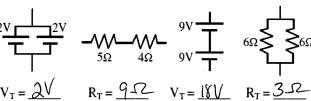
Why? Loss Resistance

3) 50 (3)

52

Which light bulb will be brighter?

Are these devices in Series or Parallel?



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 $V_{FG} = OU$  $V_{AB} = OU$   $V_{FB} = 12V$   $V_{AC} = OU$  $V_{EA} = 12U$   $V_{CE} = 12V$   $V_{DC} = 12V$ 

- A) What is the total voltage above? 1210
- B) What is the voltage from B to F?  $12^{V}$
- C) What is the resistance from B to F? 41
- D) Find the current flowing from B to F  $r = \frac{12V}{40} = 34$ (label it on the diagram).
- E) How much current flows from C to G (label it)?

F) So, using D and E above, what is the total current going thru point E (this is the total current  $[I_T]$ )?

6A

G) Using  $V_T$  and  $I_T$ , find the total resistance of the circuit  $[R_T]$ .