

1. Series	F	A	The voltage across any wire.	*
2. Short Circuit	E	B	A circuit with multiple paths for current to flow.	*
3. Parallel	B	C	Where current splits or joins.	
4. Branch	D	D	An independent path for electricity in a parallel circuit.	
5. Junction	C	E	When a wire by-passes a part of a circuit.	
6. Zero	A	F	A circuit with only one path for the electricity.	

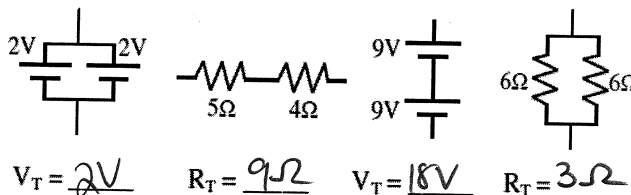
1. R_1	C	A	Voltage between A and B.	*
2. V_T	B	B	The total voltage in the circuit.	*
3. I_T	E	C	The resistance of resistor 1.	
4. V_2	F	D	The current in branch 2 of the circuit.	
5. I_2	D	E	Total current in the circuit.	
6. R_T	G	F	The voltage of battery 2.	
7. V_{AB}	A	G	The total resistance of the circuit.	

Series or Parallel Circuit? *

- S Only one path for the electricity to flow.
- S Paths are dependent on each other (one affects the other).
- P How your house is wired.
- P 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.
- P Has more than one path for the electricity to flow.
- S Two devices have the same current.
- P Two devices have the same voltage.

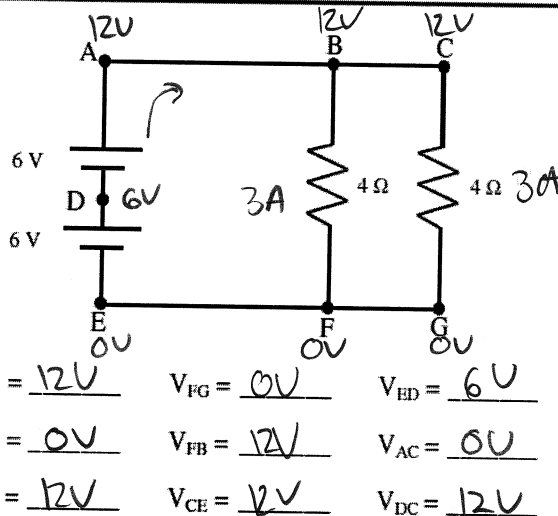
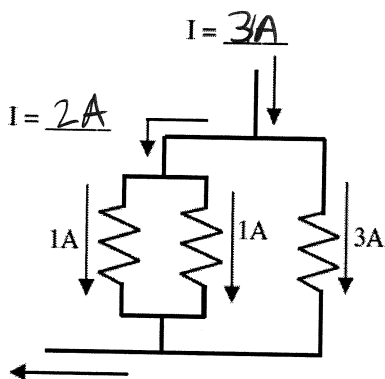
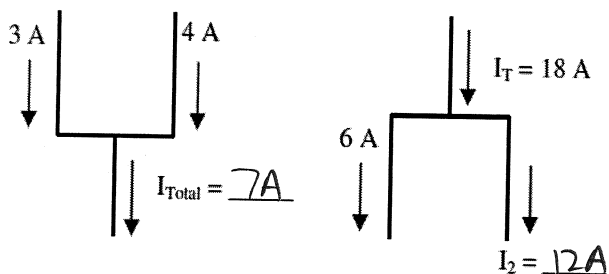
Are these devices in Series or Parallel? *

- A. P B. S C. S D. P



Understanding current. *

Fill in the missing information on the following graphics.



- A) What is the total voltage above? 12V
 B) What is the voltage from B to F? 12V
 C) What is the resistance from B to F? 4Ω
 D) Find the current flowing from B to F (label it on the diagram).
 $I = \frac{V}{R} = \frac{12V}{4\Omega} = 3I$
 E) How much current flows from C to G (label it)?
3A
 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].
 $R_T = \frac{V_T}{I_T} = \frac{12V}{6A} = 2\Omega$

Which resistor will have more current running thru it? 5Ω

Why? Less resistance

Which light bulb will be brighter? 5Ω

