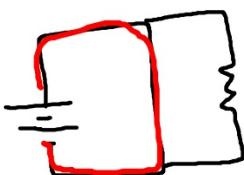
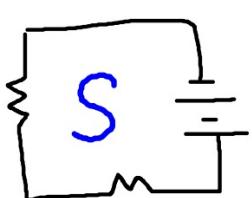
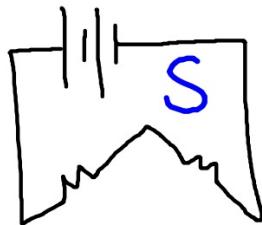


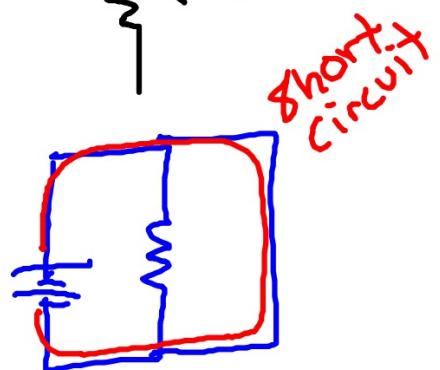
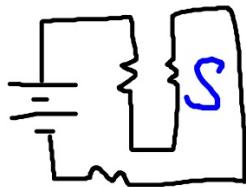
Bellwork 5/18
Which are series circuits?



\equiv (Battery)



\setminus (resistor)



Series Circuits

$$I = V/R$$

$$R_t = R_1 + R_2 + R_3$$

1) To solve for the total resistance, mathematically, you need to:

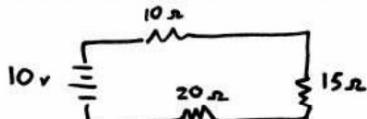
2) (MC) Which is the same everywhere in series circuits?

- A) Voltage B) Current C) Resistance

3) If you unplug one bulb from a 3 bulb series circuit, the other 2 bulbs will

4) The number of paths electricity can take in a series circuit is _____.

5)



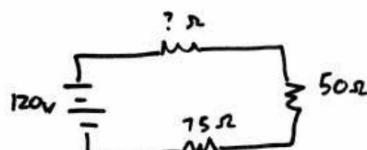
	Voltage (Volts)	Current (Amps)	Resistance (ohms)
R1			10
R2			15
R3			20
Total	10		45Ω

$$V = IR$$

$$10V = I(45\Omega)$$

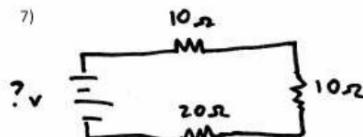
use
Ohm's Law
 $V = IR$

6)



	Voltage (Volts)	Current (Amps)	Resistance (ohms)
R1		0.8	
R2		0.8	50
R3		0.8	75
Total	120	0.8	150

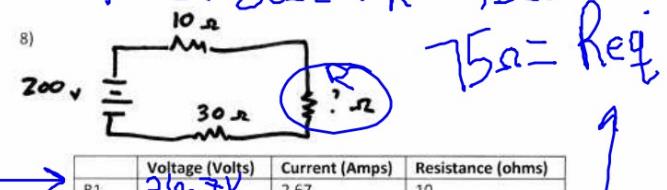
7)



	Voltage (Volts)	Current (Amps)	Resistance (ohms)
R1		2.5	10
R2		2.5	10
R3		2.5	20
Total		2.5	

$$10\Omega + 30\Omega + R = 75\Omega$$

8)

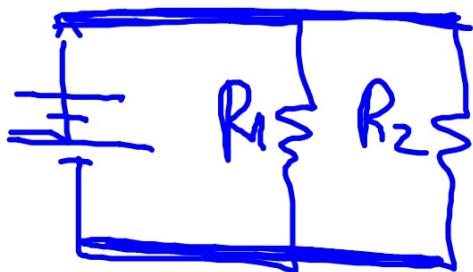


	Voltage (Volts)	Current (Amps)	Resistance (ohms)
R1	26.7V	2.67	10
R2	93.45V	2.67	30
R3	80.0V	2.67	75
Total	200	2.67	

Voltage
3 current through battery

Parallel

- ↳ multiple paths for current
- ↳ all voltages the same



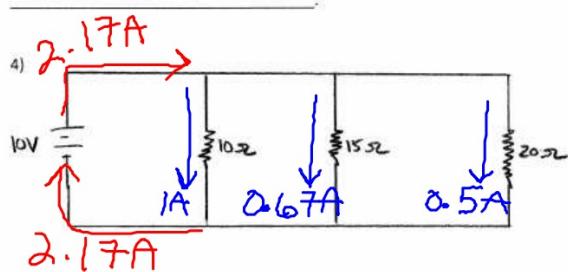
$$R_{\text{eq}}(\text{parallel}) = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \dots}$$

Parallel Circuits

1) Adding more resistors in SERIES will _____ total resistance, while adding more resistors in PARALLEL will _____ total resistance.

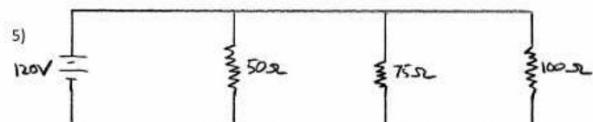
2) (MC) Which is the same everywhere in parallel circuits?
 A) Voltage B) Current C) Resistance

3) If you unplug one bulb from a 3 bulb parallel circuit, the other 2 bulbs will:

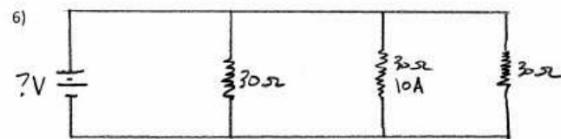


	Voltage (Volts)	Current (Amps)	Resistance (ohms)
R1	10	1	10
R2	10	0.67	15
R3	10	0.5	20
Total	10	2.17	4.62

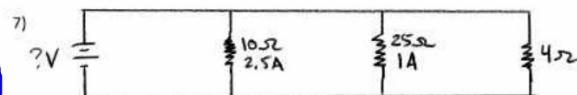
$$R_{eq} = \frac{1}{\frac{1}{10} + \frac{1}{15} + \frac{1}{20}} =$$



	Voltage (Volts)	Current (Amps)	Resistance (ohms)
R1	120		50
R2	120		75
R3	120		100
Total	120		



	Voltage (Volts)	Current (Amps)	Resistance (ohms)
R1			30
R2		10	30
R3			30
Total			



	Voltage (Volts)	Current (Amps)	Resistance (ohms)
R1		2.5	10
R2		1.0	25
R3			4
Total		10	