

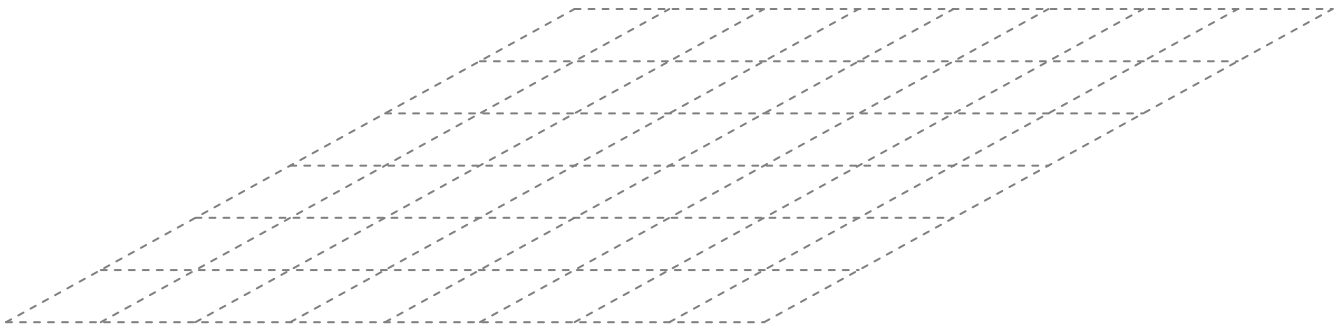
Part A

Name _____.

Diagram this circuit:

A circuit made of three resistors in parallel to each other having values 10Ω , 15Ω , 22Ω , and connected to a 3.0V battery.

Check your diagram with Mr. C before continuing

Plot the circuit including current arrows

1. Calculate the voltage across and the current through each resistor and the battery. Show all work and equations including substitution with units.

2. Explain how you came to each of your calculations.

3. Check your prediction with the class and Mr. C. Report your predictions using the Senteo clicker. (Include Units)

Resistor Value	Prediction		Class	
	V	I	V	I
Battery				

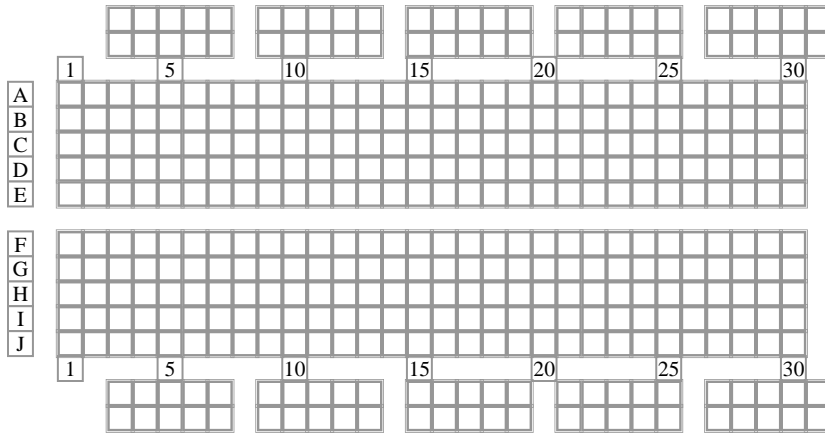
4. Construct the circuit.

Check your circuit with Mr. C before connecting to power supply

5 Record the measured voltages across each resistor and battery. Calculate the currents. (Include Units)

Resistor Value	V	I
Battery		

6. Draw your circuit how it looks on the breadboard for future reference.



7. Use the DMM as an ohmmeter to measure the exact value of each of the resistors you used to build your circuit. (Include Units)

Resistor Value	Measured

8. Taking into account the tolerance of each resistor did you use the correct resistors?

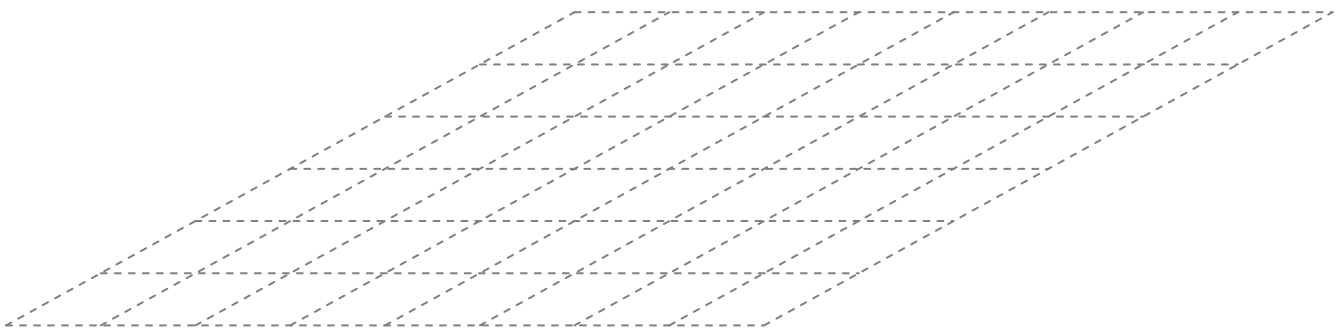
Part B

Name _____.

Diagram this circuit:

A circuit consisting of a 100Ω resistor connected in series to a 10Ω and 100Ω resistor that are in parallel with each other and then connected to a 47Ω resistor again in series; all connected to a $9.0V$ battery.

Check your diagram with Mr. C before continuing

Plot the circuit including current arrows

1. Calculate the voltage across and the current through each resistor and the battery. Show all work and equations including substitution with units.

2. Explain how you came to each of your calculations.

3. Check your prediction with the class and Mr. C. Report your predictions using the Senteo clicker. (Include Units)

Resistor Value	Prediction		Class	
	V	I	V	I
Battery				

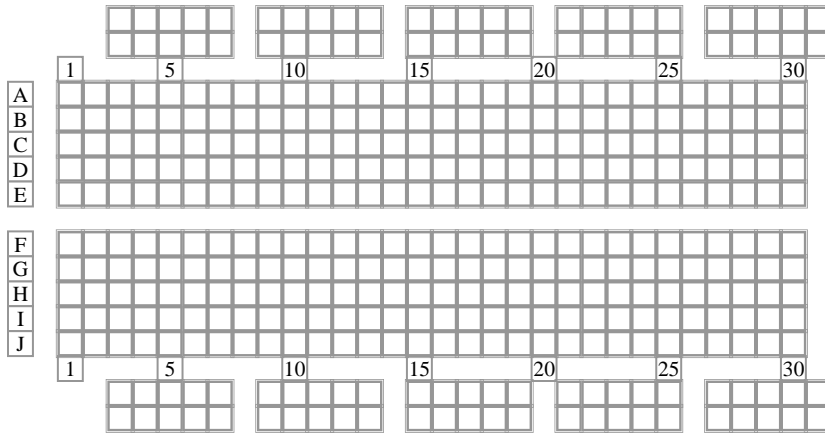
4. Construct the circuit.

Check your circuit with Mr. C before connecting to power supply

**5 Record the measured voltages across each resistor and battery.
Calculate the currents. (Include Units)**

Resistor Value	V	I
Battery		

6. Draw your circuit how it looks on the breadboard for future reference.



7. Use the DMM as an ohmmeter to measure the exact value of each of the resistors you used to build your circuit. (Include Units)

Resistor Value	Measured

8. Taking into account the tolerance of each resistor did you use the correct resistors?

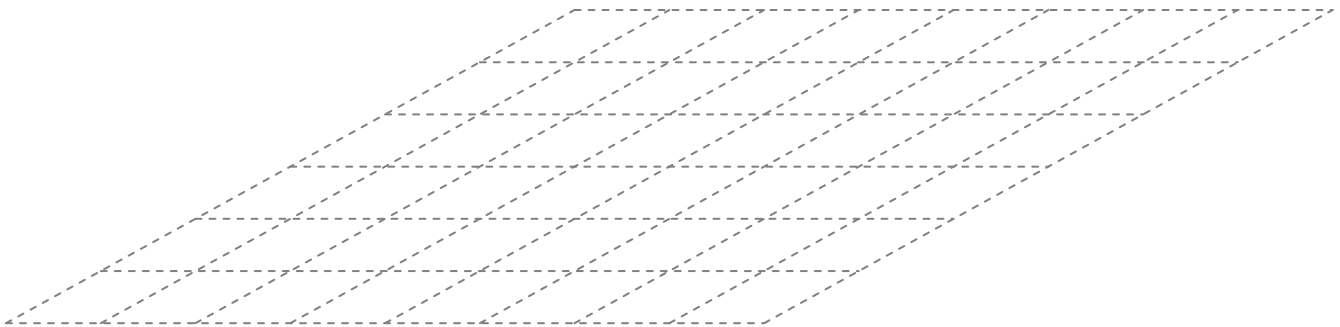
Part C

Name _____.

Diagram this circuit:

A circuit consisting of a 15Ω resistor connected in series to a 10Ω where both are connected in parallel to a 22Ω resistor and the combination is connected in series to a 100Ω resistor; all connected to a $3.0V$ battery.

Check your diagram with Mr. C before continuing

Plot the circuit including current arrows

1. Calculate the voltage across and the current through each resistor and the battery. Show all work and equations including substitution with units.

2. Explain how you came to each of your calculations.

3. Check your prediction with the class and Mr. C. Report your predictions using the Senteo clicker. (Include Units)

Resistor Value	Prediction		Class	
	V	I	V	I
Battery				

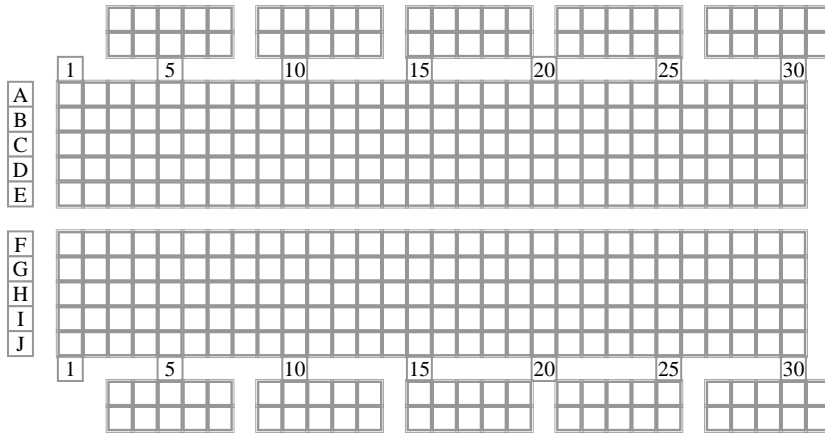
4. Construct the circuit.

Check your circuit with Mr. C before connecting to power supply

5 Record the measured voltages across each resistor and battery. Calculate the currents. (Include Units)

Resistor Value	V	I
Battery		

6. Draw your circuit how it looks on the breadboard for future reference.



7. Use the DMM as an ohmmeter to measure the exact value of each of the resistors you used to build your circuit. (Include Units)

Resistor Value	Measured

8. Taking into account the tolerance of each resistor did you use the correct resistors?