

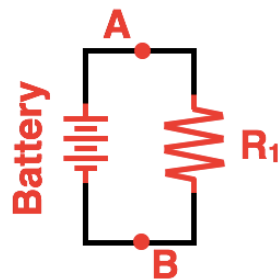
$\Delta V = I \cdot R$ Calculations for Parallel Circuits

Activity 1: Apprentice Difficulty Level

Question 1:

Complete the table based on the circuit diagram shown at the right. The Resistance value (R_1) varies from row to row. The Battery Voltage also varies from row to row.

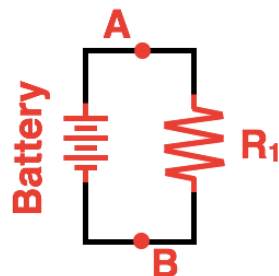
	Battery Voltage (V)	Resistor 1 R_1 (Ω)	Current @A I_A (Amps)	Current @B I_B (Amps)
1	12.0	3.0		
2	12.0	4.0		
3		3.0		6.0
4	12.0		0.5	
5	24.0			1.5



Question 2:

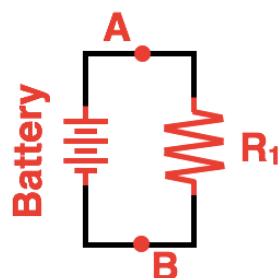
Complete the table based on the circuit diagram shown at the right. The Resistance value (R_1) varies from row to row. The Battery Voltage also varies from row to row.

	Battery Voltage (V)	Resistor 1 R_1 (Ω)	Current @A I_A (Amps)	Current @B I_B (Amps)
1	18.0	6.0		
2	18.0	9.0		
3		4.0		3.0
4	18.0		1.5	
5	12.0			0.5



Question 3:

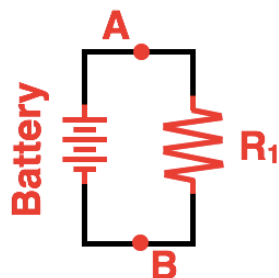
Complete the table based on the circuit diagram shown at the right.
The Resistance value (R_1) varies from row to row. The Battery Voltage also varies from row to row.



	Battery Voltage (V)	Resistor 1 R_1 (Ω)	Current @A I_A (Amps)	Current @B I_B (Amps)
1	24.0	6.0		
2	24.0	8.0		
3		2.0		4.5
4	6.0		0.5	
5	6.0			1.5

Question 4:

Complete the table based on the circuit diagram shown at the right.
The Resistance value (R_1) varies from row to row. The Battery Voltage also varies from row to row.

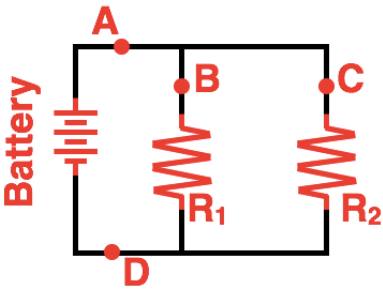


	Battery Voltage (V)	Resistor 1 R_1 (Ω)	Current @A I_A (Amps)	Current @B I_B (Amps)
1	6.0	3.0		
2	6.0	4.0		
3		3.0		4.0
4	12.0		0.5	
5	24.0			1.5

Activity 2: Master Difficulty Level

Question 5:

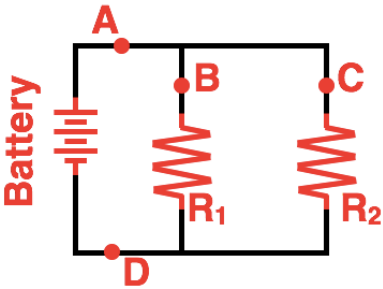
Complete the table based on the circuit diagram shown at the right. Resistance values (R_1 and R_2) vary from row to row. The Battery Voltage also varies from row to row.



	Battery Voltage (V)	Resistor 1 R_1 (Ω)	Resistor 2 R_2 (Ω)	Current @A I_A (Amps)	Current @B I_B (Amps)	Current @C I_C (Amps)	Current @D I_D (Amps)
1	12.0	6.0	3.0	6.0			6.0
2	12.0	2.0	3.0	10.0			
3	24.0	3.0	6.0				
4	30.0	5.0	10.0				
5	24.0	4.0				3.0	

Question 6:

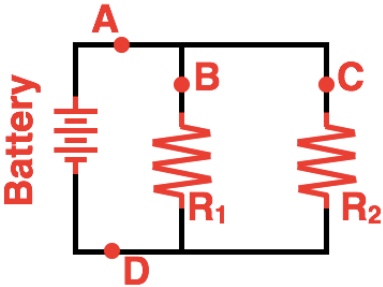
Complete the table based on the circuit diagram shown at the right. Resistance values (R_1 and R_2) vary from row to row. The Battery Voltage also varies from row to row.



	Battery Voltage (V)	Resistor 1 R_1 (Ω)	Resistor 2 R_2 (Ω)	Current @A I_A (Amps)	Current @B I_B (Amps)	Current @C I_C (Amps)	Current @D I_D (Amps)
1	6.0	3.0	2.0	5.0			5.0
2	12.0	3.0	2.0	10.0			
3	12.0	6.0	3.0				
4	24.0	4.0	8.0				
5	30.0	5.0				5.0	

Question 7:

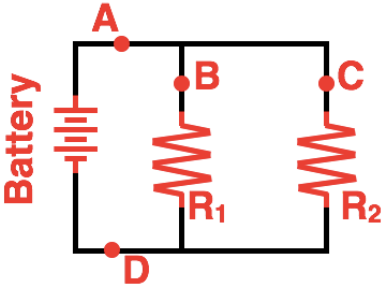
Complete the table based on the circuit diagram shown at the right. Resistance values (R_1 and R_2) vary from row to row. The Battery Voltage also varies from row to row.



	Battery Voltage (V)	Resistor 1 R_1 (Ω)	Resistor 2 R_2 (Ω)	Current @A I_A (Amps)	Current @B I_B (Amps)	Current @C I_C (Amps)	Current @D I_D (Amps)
1	6.0	2.0	3.0	5.0			5.0
2	6.0	4.0	12.0	2.0			
3	12.0	3.0	6.0				
4	24.0	2.0	8.0				
5	36.0	4.0				6.0	

Question 8:

Complete the table based on the circuit diagram shown at the right. Resistance values (R_1 and R_2) vary from row to row. The Battery Voltage also varies from row to row.

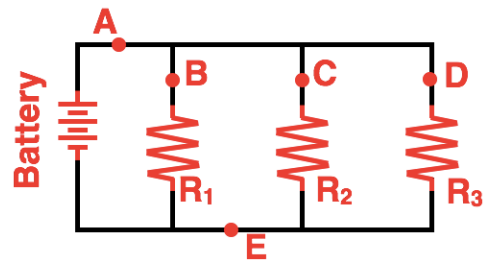


	Battery Voltage (V)	Resistor 1 R_1 (Ω)	Resistor 2 R_2 (Ω)	Current @A I_A (Amps)	Current @B I_B (Amps)	Current @C I_C (Amps)	Current @D I_D (Amps)
1	12.0	2.0	4.0	9.0			9.0
2	24.0	2.0	4.0	18.0			
3	24.0	8.0	6.0				
4	36.0	12.0	4.0				
5	48.0	6.0				12.0	

Activity 3: Wizard Difficulty Level

Question 9:

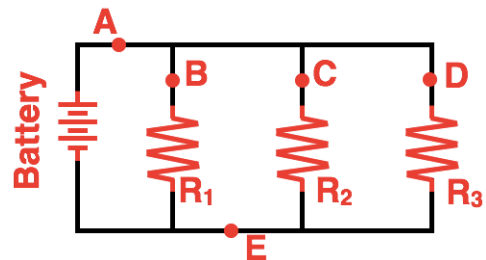
Complete the table based on the circuit diagram shown at the right. Resistance values (R_1 , R_2 , and R_3) vary from row to row. Battery Voltage also varies from row to row.



	Battery Voltage (V)	Resistor 2 R_2 (Ω)	Current @A I_A (Amps)	Current @B I_B (Amps)	Current @C I_C (Amps)	Current @D I_D (Amps)	Current @E I_E (Amps)
1	12.0	2.0	12.0			2.0	
2	18.0	6.0		6.0			5.0
3	18.0		12.0	3.0	6.0		
4		4.0	20.0		6.0	2.0	
5	30.0		15.0			5.0	11.0

Question 10:

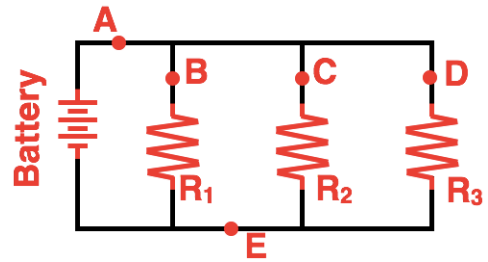
Complete the table based on the circuit diagram shown at the right. Resistance values (R_1 , R_2 , and R_3) vary from row to row. Battery Voltage also varies from row to row.



	Battery Voltage (V)	Resistor 2 R_2 (Ω)	Current @A I_A (Amps)	Current @B I_B (Amps)	Current @C I_C (Amps)	Current @D I_D (Amps)	Current @E I_E (Amps)
1	6.0	2.0	5.0			0.5	
2	12.0	6.0		3.0			4.0
3	24.0		16.0	8.0	6.0		
4		5.0	14.0		6.0	5.0	
5	36.0		22.0			6.0	18.0

Question 11:

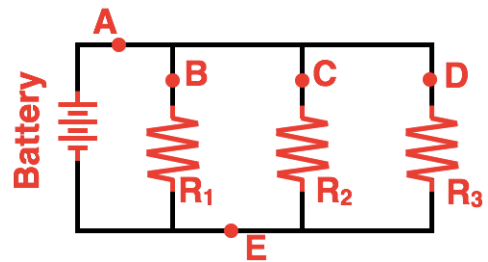
Complete the table based on the circuit diagram shown at the right. Resistance values (R_1 , R_2 , and R_3) vary from row to row. Battery Voltage also varies from row to row.



	Battery Voltage (V)	Resistor 2 R_2 (Ω)	Current @A I_A (Amps)	Current @B I_B (Amps)	Current @C I_C (Amps)	Current @D I_D (Amps)	Current @E I_E (Amps)
1	12.0	2.0	12.0			4.0	
2	12.0	6.0		4.0			5.0
3	18.0		18.0	6.0	3.0		
4		12.0	21.0		3.0	6.0	
5	48.0		26.0			6.0	14.0

Question 12:

Complete the table based on the circuit diagram shown at the right. Resistance values (R_1 , R_2 , and R_3) vary from row to row. Battery Voltage also varies from row to row.



	Battery Voltage (V)	Resistor 2 R_2 (Ω)	Current @A I_A (Amps)	Current @B I_B (Amps)	Current @C I_C (Amps)	Current @D I_D (Amps)	Current @E I_E (Amps)
1	12.0	3.0	13.0			3.0	
2	24.0	6.0		6.0			12.0
3	24.0		22.0	12.0	6.0		
4		6.0	30.0		5.0	10.0	
5	48.0		22.0			12.0	18.0