

# BLM Answers

## BLM 7-1 Human Series Circuit

3. The circuit was complete when all components were linked together. There was no break in the chain.
4. The results should be the same.
5. No. The location of the switch does not make a difference in a series circuit.
6. Add students to represent batteries. Connect them in series.

## BLM 7-3 Circuits Performer

15. Answers will vary. Answers should relate the student's observations to the properties of series and parallel circuits.
16. Answers will vary. Students might benefit from discussing this question with group members.
17. Student answers will vary. Students might benefit from discussing this question with group members.

## BLM 7-4 Parallel Circuit

2. 0.48
4. 0.72

Data Table to Record Volts			
	Position 1 (V)	Position 2 (V)	Position 3 (V)
Voltage in step 5	6.0	6.0	6.0

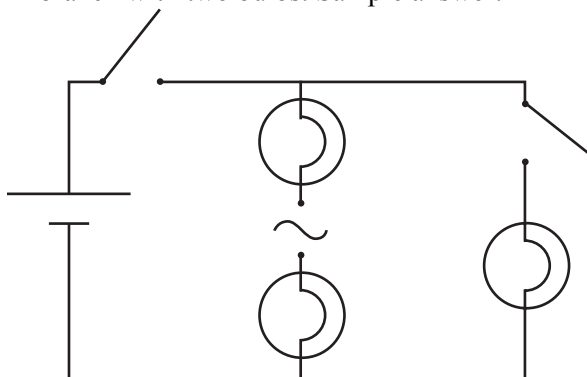
6. Current increases.
7. Voltage remains constant.

## BLM 7-5 Label the Circuit Diagrams

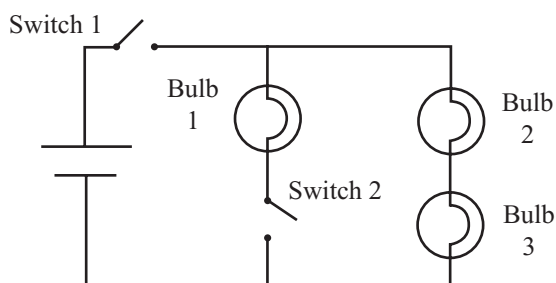
1. parallel circuit
2. series circuit
3. combination circuit
4. series circuit
5. combination circuit
6. parallel circuit

## BLM 7-6 Chapter 7 Practice Test

1. a) F. Current has one path to follow in a series circuit. Or, Current has several paths to follow in a parallel circuit.  
b) T  
c) F. Voltage across the load changes (or increases) as you add more sources in series.  
d) T
2. a) parallel  
b) combination  
c) series
3. Answers will vary. Switch 1 must be located after the battery while the other switch will be located in the branch with two bulbs. Sample answer:



4. Accept all reasonable answers. For example:  
If one bulb burns out in a parallel circuit, the other bulbs will still be lit.
5. No bulbs will be lit.
6. Bulbs 1 and 2 will be lit.
7. Bulb 3 will be on; Bulbs 1 and 2 will be off.
8. Bulb 3 will be the brightest.
9. Sample answer:

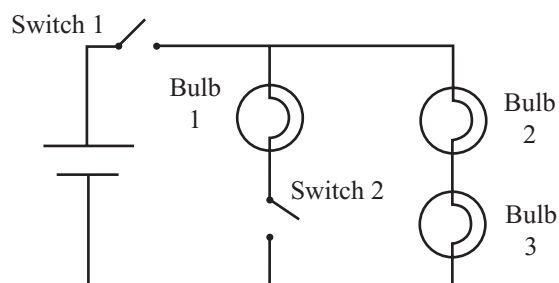


Switch 2 can be located before or after Bulb 1 in the same branch.

**BLM 7-7 Chapter 7 Test**

1. a) T  
b) F. Current increases as you add loads in parallel.  
c) T  
d) F. A switch can control many devices at one time.
2. a) combination  
b) series  
c) parallel
3. Answers will vary. Switch 1 must be located after the battery while the other switch will be located in a branch.
4. Accept all reasonable answers. For example:  
If one bulb burns out in a series circuit, none of the other bulbs will be lit.
5. No bulbs will be lit.

6. Bulb 3 will be on; Bulbs 1 and 2 will be off.
7. Bulbs 1 and 2 will be lit.
8. Bulb 3 will be the brightest.
9. Sample answer:



Switch 2 can be located before or after Bulb 1 in the same branch.