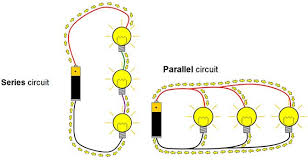
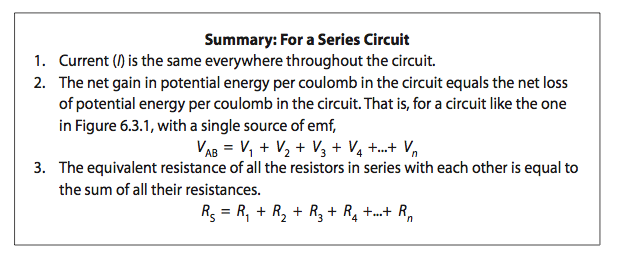
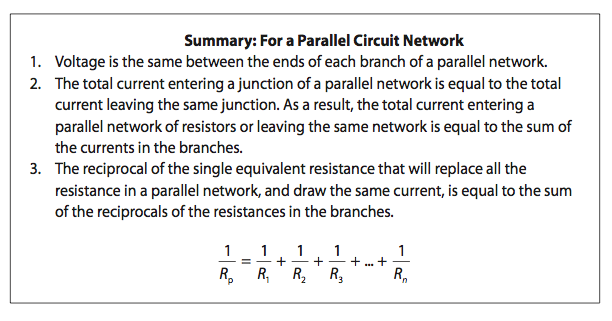
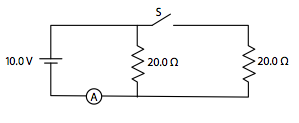
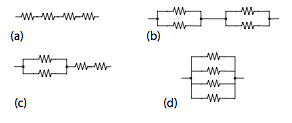
Worksheet 7.2 Series and Parallel Circuits – Determining Voltage, Current and Resistance



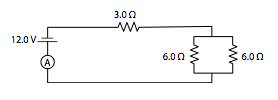




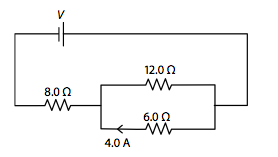
1. The current through A is 0.50 A when the switch S is open. What will the current be through A when the switch S is closed?

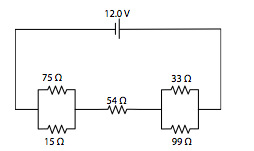
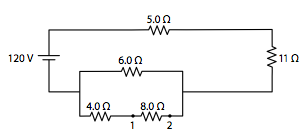


1. Which one of the following arrangements of four identical resistors will have the least resistance?



1. What is the current in the ammeter A in this circuit?



1. What is the voltage *V* of the power supply in the circuit below?
2. Use this circuit diagram to answer the questions below.
   1. What is the equivalent resistance of this circuit?
   2. What is the current through the 54 Ω resistor?
   3. How much power is dissipated in the 54 Ω resistor?
3. Use this circuit diagram to answer the questions below.
4. What is the voltage across the 8.0 Ω resistor (between 1 and 2)?
5. How much power is dissipated in the 5.0 Ω resistor?

Answers:

1. (1.0 A)
2. (D)
3. (2.0 A)
4. (72 V)
5. a. 91 Ω b. 0.13 A c. 0.93 W
6. a. 16 V b. 180 W