

Student's Name:

Date: May 16, 2012

ESCI-61, Introduction to Photovoltaic Systems

Basics of Electricity - Practice Exercises

1. An electric resistor of 10 Ohms is connected back-to-back to a voltage source ; the current traversing the resistor is 10 Amps ; what is the voltage applied by the voltage source ?
2. An electric resistor is connected back-to-back to a voltage source of 50 Volts ; the current traversing the resistor is 10 Amps ; what is the resistance of this resistor?
3. An electric resistor of 10 Ohms is connected back-to-back to a 10 Volts voltage source ; what is the current traversing the resistor?
4. An electric resistor is connected back-to-back to a 10 Volts voltage source ; the current traversing the resistor in this case is 10 Amps ; what is the power consumed by the resistor ?
5. A 100W light bulb is connected back-to-back to a voltage source ; the current traversing the resistor is 10 Amps ; what is the voltage applied by the voltage source ?
6. An electric resistor is connected back-to-back to a 10 Volts voltage source ; the power consumed by the resistor in this case is 100 Watts ; what is the current traversing the resistor?

7. A light bulb is connected back-to-back to a 10 Volts voltage source ; the power consumed by the light bulb in this case is 100W ; what is the resistance of the light bulb ?

8. A light bulb is connected back-to-back to voltage source ; the power consumed by the light bulb in this case is 100W and the current traversing the light bulb in this case is 10 Amps ; what is the resistance of the light bulb ?

9. A 10 Ohms electric resistor is connected back-to-back to a voltage source ; the current traversing the resistor in this case is 10 Amps ; what is the power consumed by the resistor?

10. A 10 Ohms electric resistor is connected back-to-back to a 10 Volts voltage source ; what is the power consumed by the resistor?

11. An 10 Ohms electric resistor is connected back-to-back to a voltage source ; the power consumed by the resistor is 10W ; what is the voltage of the voltage source?

12. An 10 Ohms electric resistor is connected back-to-back to a voltage source ; the power consumed by the resistor in this case is 1000 Watts ; what is the current traversing the resistor?