

**Resistance Practice Problems**  
Please do NOT write on this sheet.

1. What is the current of a circuit that has 3 V and 0.5 ohm of resistance?
2. What is the voltage if current is 0.5 A [ampere] and resistance is 0.8 ohm?
3. What is the resistance if voltage is 3.0 V and current is 1.5 A?
4. Find the electrical resistance of a light bulb which passes 2A of current when a potential difference of 120V is placed across it.
5. Suppose a bulb passes 3A of current when 120V is put across it, what then is its resistance?
6. 3 V is applied across a 6  $\Omega$  resistor. What is the current?
7. A 1.2 k $\Omega$  resistor passes a current of 0.2 A. What is the voltage across it?
8. What is the voltage of a circuit with a resistance of 250 ohms and a current of 0.95 amps?
9. If the Voltmeter reading is 12V, and the Ammeter reading is 3A, what is the resistance?
10. What is the value of the resistor if a current of 2A flows when 8V is applied?
11. How much current will flow through a 10 Ohm resistor when 30V is applied?
12. What voltage is required to cause a current of 0.5A to flow through a 10 Ohm resistor?
13. A current of .1 Ampere flows through a resistance of 100 ohms. The potential difference across the resistance is what?
14. A voltage of 9 volts exists across a 27 ohm resistor. What is the current through the resistance?
15. A 1.2 ohm resistor passes a current of .2 A. What is the voltage across it?
16. What is the voltage of a circuit with a resistance of 250 ohms and a current of 0.95 amps?
17. A small electrical pump is labeled with a rating of 3 amps and a resistance of 40 ohms. What voltage was meant to run at?
18. A nine volt battery is hooked up to a light bulb with a rating of three ohms. How much current passes through the light?
19. A lamp is plugged into the wall outlet, which is providing 110 volts. An ammeter attached to the lamp shows 2 amps flowing through the circuit. How many ohms of resistance is the lamp providing?
20. If your skin has a resistance of 100,000 ohms, and you touch a 9-volt battery, what current will flow through you?
21. What current will flow through you if you touch 120-volt house potential?
22. Soaked in seawater, your resistance is lowered to 100 ohms. Now how much current will flow through you if you touch the 9-voltt battery?
23. Soaked in seawater, what current will flow through you if you touch the 120-volt house potential?