

Student Activity Sheet 1-7

Ohm's Law Practice Using Common Electronic Prefix Values

Name _____ Score _____

Date _____

The problems below are a combination of the Ohm's law and electrical prefix activity sheets (Student Activity Sheets 1-3 and 1-6). Express all answers using the most appropriate prefix.

1. A current of _____ amps will be present when a 24 k Ω resistance is connected to a 12-volt supply 1. _____
2. A source of _____ volts is required to create a current of 0.125 amps through a 50 k Ω resistance 2. _____
3. A(n) _____ ohm resistance is needed to create a 50 milliamp current when connected to a 6-volt source 3. _____
4. When 50 microamps are flowing through a 60 k Ω resistor, a (n) _____ volt source is supplying the potential for the circuit 4. _____
5. A voltage value of _____ volts is required to exert sufficient force to produce a current of 5 μ A through a 20 ampM Ω resistance. 5. _____
6. A 4 M Ω resistance connected to a 120-volt source will generate a current value equal to _____. 6. _____
7. A source of 1200 mV is applied to a resistance of 3.6 k Ω and produces a current equal to _____. 7. _____
8. When a 24-volt source is connected to an 8 k Ω resistance, a current of _____ will be produced. 8. _____

9. A resistance value of $1.2 \text{ k}\Omega$ also has a current value equal to 25 mA . There must be a potential equal to _____. 9. _____
10. A resistor value of $3.6 \text{ k}\Omega$ has a current value equal to $25 \text{ }\mu\text{A}$. this means that there must be a supply of _____ connected to the resistance. 10. _____
11. A $15 \text{ k}\Omega$ resistor connected to a 12-volt battery will produce _____ A. 11. _____
12. _____ Ω are required to produce 15 mA when connected to 1.5 V . 12. _____
13. A 24- volt battery will produce _____ when connected to a $450 \text{ k}\Omega$ resistance. 13. _____
14. A _____ volt source is required to produce $12 \text{ }\mu\text{A}$ through a $240 \text{ k}\Omega$ resistance. 14. _____
15. An EMF equal to _____ is needed to produce a current of 0.000015 A when connected to a $1,200,000 \text{ ohm}$ resistance. 15. _____
16. A voltage equal to _____ is required to produce 360 kA when connected to a load equal to 2 ohms . 16. _____
17. A generator produce 14.2 kV while supplying a(n) _____ Ω load at 7 amps . 17. _____