## Physics Unit Introduction

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- | --- |
| Statement | True or False (circle one) | Textbook Explanation |
| 1. Positively charged objects have gained protons (7.1)
 | True or False   |   |
| 1. Electrons can move more easily in some materials compared to others (7.1)
 |  True or False   |   |
| 1. A charged object can only attract other charged objects. (7.1)
 |  True or False   |   |
| 1. A unit of electric charge is called a Coulomb (7.1)
 |  True or False   |   |
| 1. Static electricity can be very powerful. (7.1)
 |  True or False   |  |
| 1. The only type of force is physical force, when you push or pull something. (7.2)
 | True or False   |   |
| 1. Like charges (both positive or both negative) attract (7.2)
 | True or False   |   |
| 1. The electrostatic force between two charged objects is *independent* of the distance between them. (7.2)
 | True or False   |  |
| 1. Batteries have electricity inside them. (8.1)
 | True or False   |   |
| 1. Ohm’s law is used to calculate the amount of current (8.3)
 | True or False   |  |
| 1. Resistors, which help control current in a circuit are all identical (8.3)
 | True or False   |  |
| 1. Circuits can only have one path for current to follow. (9.1)
 | True or False   |  |



1. How does Diagram One show that A and B are both neutral?

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1. Diagram two shows A and B after they have been rubbed together.
2. Are they still neutral? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii. What is the charge on A? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

iii. What is the charge on B? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What was transferred to create this charge? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Count the total number of negative charges (electrons) in Diagram One and count the number of negative charges in Diagram Two.

Number of negative charges diagram 1: \_\_\_\_\_\_ Number of negative charges diagram 1: \_\_\_\_\_\_\_

What do you notice about these numbers? Were any electrons lost in the charging process?

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2. Draw positive and negative signs in each object to demonstrate a neutral object being charged positive and a neural object being charged negative. Make sure you keep track of the **number** of positive and negative charges in your diagram.