

Title- Metal or Nonmetal

Problem- What physical properties separate metal elements from nonmetal elements?

Materials: Ruler, Triple Beam , Voltage meter(Lab Pro)

Hypothesis-

Procedure-

- 1. Examine each substance one at a time.**
- 2. Test, measure, or describe each property listed on data table.****Note: DO NOT BEND METALS NEEDLESSLY TO TEST MALLEABILITY.**
- 3. Record results in proper location on data table.**
- 4. Regular geometric solid volume should be measured with a ruler to determine: length, width, and height. Use water displacement to determine the volume of irregular geometric solids.**
- 5. Use the triple beam to measure mass. Calculate the density in g/cm³ and record on data table. Round final answer to the nearest hundredth.**
- 6. Use the Lab Pro Volt Meter to test for electrical conductivity. Remember: a change in voltage indicates the material is able to conduct electricity.**
- 7. Classify the substances you tested as Metals or Nonmetals. Record this on the data table.**
- 8. Calculate the percent error of the densities you determined by using the formula provided by the instructor.**

$$\left(\frac{\text{BookValue} - \text{ExperimentalValue}}{\text{BookValue}} \right) * 100 = \% \text{error}$$

The percent error (%error) is how much your answer is off from the actual density of the substance. In most cases, there will always be some error.

Copy the following table in your notebook....The neater the better!!!! Keep track of all the elements you observe. At Least 9... This includes two forms of Carbon!!!!

Element Symbol/ Name	Color description	Luster (shine)	Conducts?	Malleable Or Brittle?	Mass of sample (g)	Volume of sample (cm³)	Your calculated Density M/V(g/cm³)	% Error Calculated Using equation
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