

Name(s): _____

Chem 120 / Dr. Rusay

DENSITY & Measurement

Complete the following using your Group's data for *Method 1* from your previous average measurements.

Method 1:

Unknown Number Reference # _____

Measure and record the cylinder's length. _____

Measure and record the cylinder's diameter. _____

Weigh and record the mass of the cylinder. _____

DENSITY of cylinder (g/cm^3) _____

Identity of metal _____

Method 2:

Volume of water in graduated cylinder + metal cylinder. _____

Volume of water in graduated cylinder _____

Volume of metal cylinder. _____

Which method is most accurate in determining the density of the metal cylinder?
Briefly explain your choice.

Experimentally Determining Density
Significant Figures, Accuracy, Precision and Data Analysis

Complete the form on the opposite side of this page: one per group with each group member's name, turn-in when completed and DUE.

1. Calculate the density of a metal cylinder using your linear measurements and the mass. Be sure to have the correct number of significant figures. Identify the metal from its density.
2. Using the same cylinder, record it's mass and measure its volume by displacement using a graduated cylinder and water. Enter your data on the form. Calculate the density. Record the value and provide a brief discussion of which method is more accurate.