Before you start the lab, write the reference info into your lab book (10pts)

Lab 3: Measurement & SI Units

Purpose: Practice converting between metric units

Objective:
-Obtain 20 Measurements of the size, volume, or mass of various objects
-Give measurements in the base unit, and select 2 other units to convert to
-Calculate the density of each sample

Data Table: Create a data table that allows for measurement in (a) SI standard units, and (b) two other conversions. For example, if you are measuring your height, the data needs to be recorded in meters (m), centimeters (cm), and kilometers (km). Must show all calculation set up in "calculation" section.

Analysis: No graph, but answer the following:

1. What is the importance of standard units of measure
2. Calculate the density of each sample using the formula density= mass/volume.
3. Does mass depend on the size or shape of an object? Explain
4. Identify the variables you used to determine the volume of each sample
5. List the standard units you used in this investigation

Ex: DATA *Must write units!

Object to measure	Base Unit	Converted Msmt #1	Converted Msmt #2	Mass	Volume	Density
1. iphone X	14.5 cm	0.145 m	145 mm	174 g	116 cm^3	1.5 g/cm^3
2.						
↓						
20.						

Ex: CALCULATIONS

① 14.5 cm ÷ 100 = 0.145 m
14.5 cm × 10 = 145 mm

Vol. = 1 cm × 8 cm × 14.5 cm = 116 cm^3

$d = \frac{m}{v}$ $\frac{174\,g}{116\,cm^3} = 1.5\,g/cm^3$