

Lab 1 Data Sheet (attach answers to the lab questions)

Part 1 — Measurement and glassware

Glassware	100 mL beaker	10 mL grad. cyl.	Large grad. cyl.
Volume of water added (<i>measured</i> volume) (mL)			
Mass without water (g)			
Mass <i>with</i> water (g)			
Mass <i>of</i> water (g)			
Temperature of water (°C)			
Density of water (CRC) (g/mL)			
<i>Calculated</i> volume of water in glassware (mL)			
% error between <i>meas.</i> and <i>calc.</i> volume			

Part 2 — Density of a metal

Metal letter		
Mass of metal cylinder (g)		
Diameter of metal cylinder (cm)		
Height of metal cylinder (cm)		
<i>Calculated</i> volume of metal cylinder (use $V = \pi r^2 h$) (cm ³)		
Density of metal based on the calculated volume (g/cm ³)		
Volume of water in grad. cylinder <i>before</i> immersion (mL)		
Volume of water in grad. cylinder <i>after</i> immersion (mL)		
<i>Measured</i> (displacement) volume of metal cylinder (mL)		
Density of metal based on the measured volume (g/mL)		
Density of metal (literature value) (g/cm ³ or g/mL)		
Percent error between literature value and calculated volume density		
Percent error between literature value and measured volume density		