**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 09/02/22**

**CH 111 Workshop 1 – Chapters 1 and 2**

1. Perform the following calculation and retain the appropriate number of significant figures in the result.
2. A rectangular container has a volume of If it is filled with a liquid with a density of 0.772 g/mL, what would be the mass (in lbs) of the liquid inside of the container?
3. Write the formula for the following:
   1. ammonium carbonate
   2. dinitrogen heptoxide
   3. nitrous acid
   4. aluminum ion
   5. iodine trichloride
   6. tin(IV) phosphate
   7. iron(II) perchlorate octahydrate
4. Give the name for each of the following:
   1. dichlorine hexoxide
   2. chromium(VI) oxide
   3. lithium acetate
   4. carbonic acid
   5. phosphorus pentachloride
   6. nickel(III) trichloride pentahydrate
   7. phosphide ion
5. Magnesium has three naturally occurring isotopes. Their masses and percent abundances are 23.985042 amu, 78.99%; 24.985837 amu, 10.00%; and 25.982593 amu, 11.01%, Calculate the average atomic mass of magnesium.
6. A 26.27 gram sample of a solid is placed in a flask. Gasoline, in which the solid is insoluble, is added to the flask so that the total volume of solid and liquid together is exactly 50.00 mL. The solid and gasoline together have a mass of 52.65 grams. The density the of gasoline is 0.864 g/mL. What is the density of the solid? Does the solid float or sink in the gasoline filled flask

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| --- | --- | --- | --- |
|  | Gasoline | Solid | Mixture |
| Mass (g) | 26.36 | 26.27 | 52.65 |
| Volume (mL) | 30.5 | 19.5 | 50.00 |
| Density (g/mL) | 0.864 | 1.35 |  |

No, the solid has a greater density that the gasoline.