Molar Mass (aka \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mass, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Weight) Notes

**The molar mass is the mass (in \_\_\_\_\_\_\_\_\_\_) of one \_\_\_\_\_\_\_\_\_\_ of a substance.**

You determine the molar mass by using the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* The atomic mass of the element is it’s molar mass.
* The molar mass of the compound would be the masses of all of the atoms in the compound added together!

**Practice:** Sulfur Trioxide Hydrogen Phosphate Carbon Tetrachloride

Iron (II) Sulfate Zinc (I) Chloride

The Mole Notes ( 1 mol = \_\_\_\_\_\_\_\_\_\_\_\_\_ particles = \_\_\_\_\_\_\_\_\_\_\_ g = \_\_\_\_\_\_\_\_ L )

The mole is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ and was named in honor of Amadeo \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* **Avogadro’s number** is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. There are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ particles in 1 mole.
* The number of particles in 1 mole of a substance is always the same ( \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) but the

\_\_\_\_\_\_\_\_\_ will be different!

**You can convert from moles to particles (atoms, molecules, compounds, etc) or from particles to moles.**

Number of atoms in 0.500 mole of Al?

moles particles

Number of moles of S in 1.8 x 1024 S atoms?

**You can convert from moles to grams.**

3.00 moles Al 🡪 ? g Al

moles grams

**You can convert from moles to liters (vol).**

4.50 Liters CO2 🡪 ? mol CO2

moles liters