Lesson 77: Introduction to the Mole Notes

Lab results: 1 dozen grains of rice = _____ g (Use this fact as a conversion factor.)

? grains of rice = 1.94 g

Avogadro's number – the _____ = the number _____

Molar Mass

the _____ of one _____ of any _____ _____

molar mass of an element (g/mol)

equals the _____ _____ of the element in grams

molar mass of a compound

equals the _____ of the _____ _____ of the _____

making up the _____.

Example problems

Find the molar masses of:

magnesium _____ g/mol   chlorine _____ g/mol

magnesium chloride _____ g/mol

Find the molar mass of aluminum oxide.

How many <u>moles</u> of atoms are there in 8.0 g of Mg?

How many <u>atoms</u> are in 0.7 g of He?

How many atoms are in 3.5 grams of silicon?

How many formula units are in 32.6 grams of potassium oxide?

How many molecules are in 0.25 grams of dinitrogen pentoxide?

<u>more example problems:</u>

What would be the mass of 5.3 x 10^{22} formula units of calcium iodide?

Lesson 77: Intro to the Mole Notes (cont.)

Episode 701 Problems: *Fill in masses from lab data and solve.*

How many atoms are in _____ grams of copper?

How many formula units are in _____ grams of salt?

How many molecules are in _____ grams of water?

The Chemistry Quiz

CR1. _____   CR2. _____   1. _____   2. _____   3. _____

4. _____   5. _____