

Name _____

Mole Relationship Practice Worksheet 2

- How many grams of oxygen gas are there in 2.5 moles of O_2 ? **Ans. 80. g O_2**
- How many molecules of CO_2 are there in 6.0 grams of CO_2 ? **Ans. 8.2×10^{22} molecules CO_2**
- How many grams of CaO are there in 5.0 moles of CaO? **Ans. 280 g CaO**
- What is the mass of a single atom of zinc? **Ans. 1.08×10^{-22} g Zn**
- What is the number of molecules of water found in 3.5 grams of water? **Ans. 1.2×10^{23} molecules H_2O**
- What is the number of moles of water found in 3.19×10^{21} molecules of water? **Ans. 0.0053 moles H_2O**
- How many formula units are found in 10.9 moles of FeO? **Ans. 6.56×10^{24} formula units FeO**
- How many grams of carbon are there in 3.76×10^{25} atoms of carbon? **Ans. 750. g C**
- How many atoms of oxygen are there in 4.5 moles of O_2 ?
(Hint-There are 2 moles of O in every O_2) **Ans. 5.4×10^{24}**
- How many fluorine atoms are there in 2.50 g of sulfur hexafluoride?
(Hint-There are 6 fluorines in every sulfur hexafluoride) **Ans. 6.18×10^{22}**
- You come down with strep throat and the doctor needs to prescribe an antibiotic. Erythromycin is the best choice to use for this type of infection. How many molecules of Erythromycin are present in the 500. g tablet of Erythromycin? Assume the tablet is pure Erythromycin. Part 2...How many carbon atoms are there?
Erythromycin is $C_{37}H_{67}NO_{13}$ --Mol. mass 733.93 g/mol
Ans. 4.10×10^{23} Molecules of Erythromycin
Ans. 1.52×10^{25} atoms of C