

Chemistry
Mole Conversions – 2-step

Name _____
Date _____ Block _____

1. How many grams are in 8.2×10^{22} molecules of N_2I_6 ?
2. 80.8 g of calcium contain how many calcium atoms?
3. What is the mass in grams of ammonia gas in 1.204×10^{24} molecules of ammonia gas, NH_3 , at STP?
4. How many grams of sucrose are in 9.112×10^{23} molecules of sucrose, $\text{C}_{12}\text{H}_{22}\text{O}_{11}$?
5. 2.03×10^{23} molecules of H_2S gas takes up how much space (in liters) at STP?
6. What is the mass in grams of boron trifluoride in 1.162×10^{23} boron trifluoride molecules?
7. How many liters are in 3.01×10^{23} molecules of ethylene gas, C_2H_4 , at STP?
8. How many grams of H_2O are in 3.47×10^{25} H_2O molecules?
9. How many grams of methane gas are in 83.33 liters of methane gas, CH_4 , at STP?
10. A large sample of iron filings has a mass of 102 grams. How many iron atoms are there?