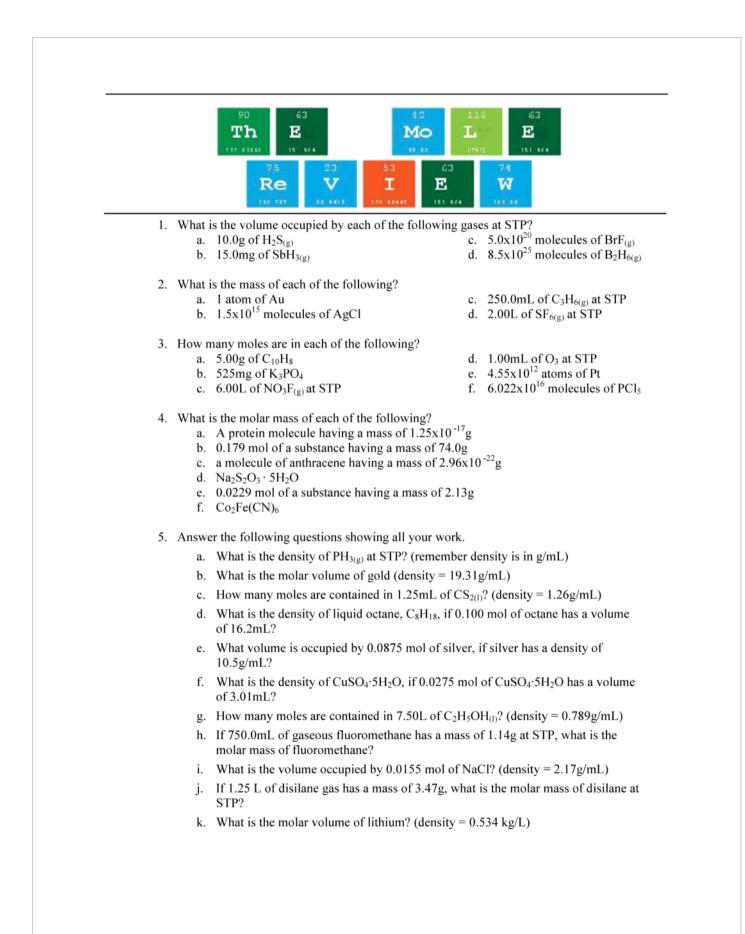
The Mole Part 1: Review

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- 6. Answer the following questions showing all your work.
 - a. How many atoms are there in 2 molecules of Hg(IO₃)₂?
 - b. What is the volume occupied by 1.45×10^{30} molecules of COF₂ at STP?
 - c. How many molecules are there in 64.0g of $FeS_{(s)}$?
 - d. How many moles are in 25.0mL of HCN(g) at STP?
 - e. What is the volume occupied by 43.5g of ClF₃ at STP?
 - f. How many moles are in 2.75 x 10^{23} atoms of Fe?
 - g. How many molecules are there in 125mL of NOCl_(g) at STP?
 - h. What is the mass of 3.011×10^{22} atoms of Pt?
 - i. What is the molar mass of $HCIO_4 \cdot 2H_2O$?
 - j. What is the density of $CH_2F_{2(g)}$ at STP?
 - k. What is the mass of 25.0mL Kr_(g) at STP?
 - I. What is the molar volume of iridium metal, Ir? (density = 22.42g/mL)
 - m. What is the molar mass of 0.0139 mol of a substance having a mass of 0.888g?
 - n. What is the density of acetic acid, CH₃COOH, if 0.250 mol of CH₃COOH has a volume of 14.3mL?
 - o. How many moles are in 85.0mg of CuSCN?
 - p. What is the volume occupied by 0.145 mol of ruby, Al₂O₃, if ruby has a density of 3.97g/mL?
 - q. What is the molar mass of an atomic particle with a mass of 9.11×10^{-28} g?
 - r. If 135L of cyanogens has a mass of 313g at STP, what is the molar mass of cyanogens?
 - s. If the density of HgS is 8.10g/mL, how many moles are in a cylinder filled with 50.0mL of HgS?