WS 3.4: Mole Conversions (two steps)
Directions: Answer the following questions. Set-up all problems using the factor-label method of dimensional analysis and show all your work and units.

8. What volume would be occupied by 9.45×10^{24} molecules of CO_2 gas at STP?

9. How many calcium atoms would be in a 100 gram sample of calcium metal?

10. How many grams are in 5.6×10^{23} atoms of Zinc?

11. Calculate the number of molecules in 4.56-g of $Pb(NO_3)_2$

12. Calculate the number of liters in 3.25-g of NH_3

13. Calculate the number of liters in 5.43×10^{25} molecules of H_2

14. Calculate the number of grams in 3.54-L of CO_2

15. Calculate the number of grams in 9.7×10^{22} molecules of CH_3CH_2OH