The Mole Lesson 1 Check for Understanding

Mole Conversions

PART ONE: Solve the following problems in your journal. Be sure to show all work. Use sig figs and units in your final answer 1 mole = 6.022×10^{23} atoms, molecules, or formula units

1. Determine the number of atoms in 4.00 moles of aluminum, Al.

2. Convert 2.65×10^{23} formula units of sodium fluoride, NaF to moles.

3. Convert 4.26×10^{25} molecules of ammonia, NH_3 to moles.

PART TWO: Molar Mass: Use these values to answer questions 7-9

Calculate the molar mass of the following Be sure to show all work. Use units in your final answer and round to proper sig figs.

4. NaF
5. $Al(OH)_3$
6. $(NH_4)_2SO_4$

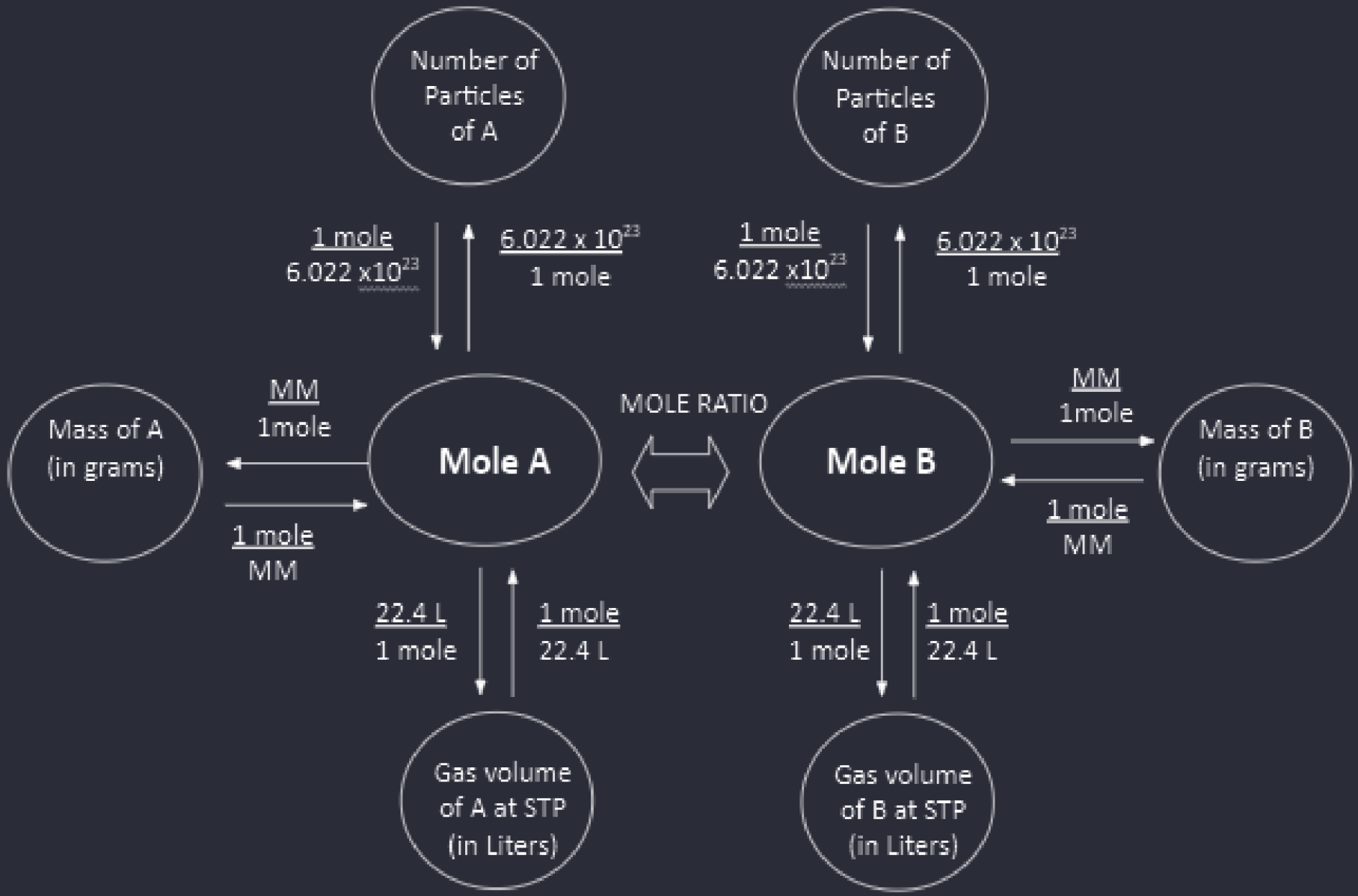
1 mole = molar mass (g)

PART THREE: Directions: Solve the following problems. Be sure to show all work. Use units in your final answer and round to the proper number of sig figs.

7. How many moles are in 15.0 grams of lithium, Li?

8. How many grams are in 4.5 moles of sodium fluoride, NaF?

9. How many moles are in 98.3 grams of $Al(OH)_3$?


Number of Particles of A
Number of Particles of B
1 mole / 6.022 x10^23
6.022 x 10^23 / 1 mole
1 mole / 6.022 x10^23
6.022 x 10^23 / 1 mole
Mass of A (in grams)
MM / 1mole
1 mole / MM
Mole A
MOLE RATIO
Mole B
MM / 1mole
1 mole / MM
Mass of B (in grams)
22.4 L / 1 mole
1 mole / 22.4 L
22.4 L / 1 mole
1 mole / 22.4 L
Gas volume of A at STP (in Liters)
Gas volume of B at STP (in Liters)