

**Mole Conversion Worksheet- Accel**

Name/Period: \_\_\_\_\_

Solve the following using dimensional analysis. Show all of your work and label all answers!

Complete the following table:

Name	Formula	Type of Compound (Ionic or Molecular)
Carbon tetrachloride		
	P <sub>2</sub> O <sub>5</sub>	
Silver nitrate		
	SO <sub>3</sub>	
	BaCl <sub>2</sub>	

- Given 3.25 mol AgNO<sub>3</sub>, determine the number of formula units.
- How many moles are in  $2.50 \times 10^{23}$  atoms Fe?
- How is a mole similar to a dozen?
- What is the relationship between Avogadro's number and one mole?
- Explain why chemists use the mole.
- Determine the number of particles in each of the following and identify the particle type (atom, formula unit, or molecule).
  - 11.5 mol Ag
  - 18.0 mol water
  - 0.150 mol NaCl
- Determine the mass in grams of 4.25 mol Zn.
- Determine the number of moles in 2.50 kg Fe.
- How many atoms are in 20.6 g Ca?
- What is the mass in grams of  $6.02 \times 10^{24}$  atoms Mn?
- What is the mass in grams of 15.7 moles of sulfur?
- How many moles of silver are in 23.0 g?

13. How many atoms nitrogen are in 6.98 grams?
14. What number of moles do you have with  $5.43 \times 10^{24}$  atoms of carbon?
15. What is molar mass?
16. Determine which of the following is the largest:
- a.  $6.00 \times 10^{24}$  atoms Ne
  - b. 20.0 g Kr
17. Determine the molar mass of ammonium phosphate. Formula: \_\_\_\_\_
18. A sample of silicon dioxide contains 6.09 moles. What mass will the sample have?
19. How many formula units are contained in 2.78 g of lithium nitride?
20. If a sample of ozone ( $O_3$ ) has a mass of 25.0 g, how many moles are there?
21.  $7.15 \times 10^{23}$  atoms of neon will have what mass (in grams)?