Chem 1 Hour\_\_\_\_\_ Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
Wexler/Steinhorst  
Moles and Molar Mass Worksheet 1  
Date\_\_\_\_\_\_

Answer the following questions. Show all calculations where relevant. Follow the rule for scientific notation in which the value must be expressed with the decimal after the first digit (3.4 x 106, **not** 34 x 105).

Remember: 1 mole of any type of particle is equal to 6.02 x 1023 particles.

**Part 1: Moles and Avogadro’s number**

1. How many atoms are in one mole of calcium? (hint: multiply the number of moles by 6.02 x 1023)

2. How many atoms are in two moles of selenium?

3. How many atoms are in four moles of titanium?

4. How many atoms are in 30 moles of carbon?

5. How many moles of silicon do you have if you are given 6.02 x 1024 atoms? (hint: divide 6.02 x 1024 by 6.02 x 1023)

**Part 2: Molar Mass of Elements**

6. What is the molar mass of calcium? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_g/mol)

7. What is the molar mass of fluorine? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_g/mol)

8. What is the molar mass of magnesium? \_\_\_\_\_\_\_\_\_\_\_\_\_\_g/mol)

9. What is the molar mass of chlorine? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_g/mol)

**Part 3: Molar Mass of Compounds**

10. What is the molar mass of CaF2? (show all calculations)

11. What is the molar mass of MgCl2? (show all calculations)