Chem 1 Hour\_\_\_\_\_ Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
Wexler/Steinhorst  
Moles and Molar Mass Worksheet 2  
Date assigned\_\_\_\_\_

**Understanding what a mole is and how it relates to Avogadro’s number and molar mass**

**Show all calculations:**

**Multiply the number of moles of an element by Avogadro’s number to calculate the number of atoms**  
1. Two moles of calcium contains how many atoms?

2. Three moles of calcium contains how many atoms?

3. Five moles of selenium contains how many atoms?

**Divide the number of atoms by Avogadro’s number to calculate the number of moles**

4. 12.04 x 1024 atoms is how many moles?

5. 12.04 x 1025 atoms is how many moles?

6. 12.04 x 1026 atoms is how many moles?

**To convert moles to mass: moles x molar mass = grams**

7. Four moles of phosphorous = \_\_\_\_\_\_\_\_\_\_\_\_\_grams

8. Four moles of sulfur = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_grams

9. Five moles of sulfur = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_grams

**To convert mass to moles: grams/molar mass = moles**

10. One hundred grams magnesium = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_moles

11. Twenty grams of iron = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_moles

12. Five grams of sulfur = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_moles