Chem 1 Hour\_\_\_\_\_ Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Wexler/Steinhorst
Moles and Molar Mass Worksheet 3
Date assigned\_\_\_\_\_

**Calculating molar mass from a chemical formula**

Show all calculations: add up the atomic weights of all the atoms in the compound

1. What is the molar mass (g/mol) of sulfuric acid (H2SO4)?

2. What is the molar mass (g/mol) of glucose (C6H12O6)?

3. What is the molar mass (g/mol) of sodium phosphate (Sc2O3)?

4. What is the molar mass (g/mol) of acetal (C6H14O2)?

5. What is the molar mass (g/mol) of nitric acid (HNO3)?

6. What is the molar mass (g/mol) of acridine (C13H9N)?

**Converting between moles and mass**

Show all calculations:

Part A. Converting mass to moles: divide grams by molar mass

7. If you are given 100g of NaCl (molar mass = 58.44g/mol), how many moles do you have?

8. If you are given 40g of NaCl (molar mass = 58.44g/mol), how many moles do you have?

9. If you are given 280g of NaCl (molar mass = 58.44g/mol), how many moles do you have?

Part B. Converting moles to mass: multiply moles by molar mass

10. If you are given 100 moles of MgCl2 (molar mass = 95.211), how many grams do you have?

11. If you are given 250 moles of MgCl2 (molar mass = 95.211), how many grams do you have?

12. If you are given 20 moles of MgCl2 (molar mass = 95.211), how many grams do you have?