LIMITING REAGENT PROBLEMS BY TYPE:

Solutions and gases

Answer sheet

**MASS/MASS: you have already done problems like this**

**SOLUTION/SOLUTION YIELDING A SOLID**

1. (10 points) **Limiting reagent = e**
2. **Excess reagent= e**
3. **Mass** of Fe3(PO4)2(s= **e**
4. [K+]= **e**
5. [PO43—]= **e**
6. [Fe3+] = **e**
7. [Cl‑—] = **e**
8. (10 Points)
9. **Grams of solid formed:** = **e**
10. [Na+]= **e**
11. [CrO42—]= **e**
12. [Sr2+]= **e**
13. [NO3‑—]= **e**

**SOLUTION/SOLID PRODUCING A SOLID, LIQUID, GAS, OR AQ**

1. (8 points)

**What mass of chromium(III) sulfide produced?**

= **e**

1. (10points)

**How many moles of precipitate form?** = **e**

1. **What are the moles of the spectator ions remaining?**

= **e**

1. **One of the ions involved in the reaction is in excess. What is the concentration of this remaining ion?**

= **e**

**GAS/GAS PRODUCING SOLID, LIQUID, GAS, OR AQUEOUS PRODUCT**

1. (8 points)

**Mass of ammonium chloride**= **e**

**Pressure of the gaseous product**= **e**

1. (8 points)

**Mass of OSF4**= **e**