CW1: Stoichiometry Problems #1

Name: Period: 1 4

Directions: Solve each problem completely, show your work and use significant figures and units in your answer.

**2N2H4 (l) + N2O4 (l) 🡪 3N2 (g) + 4H2O (g)**

1. How many moles of nitrogen gas are produced from the reaction of 0.735 mol dinitrogen tetrahydride with excess dinitrogen tetroxide?
2. How many moles of water are produced from the reaction of 24.14 moles of dinitrogen tetrahydride with excess dinitrogen tetroxide?
3. How many moles of water are produced from the reaction of 61.00 moles of dinitrogen tetroxide with excess dinitrogen tetrahydride?
4. How many moles of nitrogen gas are produced from the reaction of 0.735 moles of of dinitrogen tetroxide with excess dinitrogen tetrahydride?

**3Ag (s) + 4HNO3 (aq) 🡪 3AgNO3 (aq) + 2H2O (l) + NO (g)**

1. What mass of silver (I) nitrate is produced from the reaction of 3.65 mol silver with excess nitric acid?
2. What mass of silver (I) nitrate is produced from the reaction of 0.365 mol nitric acid with excess silver?
3. How many moles of water is produced from the reaction of 0.365g nitric acid with excess silver?
4. How many moles of water is produced from the reaction of 0.365g silver with excess nitric acid?
5. What mass of nitrogen monoxide is created from the reaction of 3.65mol of nitric acid with excess silver?
6. How many moles of nitric acid is needed to react with 3.65g silver?