CW 3 – Limiting Reactants

Name:

Period: 2 3 4

Directions: Balance each reaction and solve the stoichiometry problems.

1. AgNO3 (s) + Fe (s) 🡪 Ag (s) + Fe(NO3)3 (aq)
   1. If 10.0g of silver (I) nitrate reacts with 10.0g of Fe, determine the theoretical yield of silver and the limiting reactant.
   2. If 200.0g of silver (I) nitrate reacts with 20.00g of iron, determine the limiting reactant and the theoretical yield of iron (III) nitrate.
2. H2O (l) + CO2 (g) 🡪 O2 (g) + C6H12O6 (l)
   1. If 56.0g of water reacts with 130.0g of carbon dioxide during photosynthesis, how much glucose can be theoretically produced and which reactant is the limiting reactant?
   2. If 40.0g of water reacts with 100.0g of carbon dioxide, what is the theoretical yield of oxygen gas released and what is the limiting reactant?