

Honors Chemistry: Homework Set 8-3

1. Convert the following word equations into formula equations and balance.

- a) Zinc and lead (II) nitrate react to form zinc nitrate and lead.
- b) Aluminum bromide and chlorine gas react to form aluminum chloride and bromine gas.
- c) Sodium phosphate and calcium chloride react to form calcium phosphate and sodium chloride.
- d) Potassium metal and chlorine gas combine to form potassium chloride.
- e) Hydrogen gas and nitrogen monoxide react to form water and nitrogen gas.

2. Convert the following word equations into formula equations and balance. Be sure to include state labels and reaction conditions in the equation.

- a) Oxygen gas reacts with solid copper metal to form copper (II) oxide solid.
- b) Solid magnesium reacts with aqueous silver nitrate to form solid silver and aqueous magnesium nitrate.
- c) Solid potassium metal reacts with water giving an aqueous solution of potassium hydroxide and releasing hydrogen gas.
- d) Dinitrogen pentoxide gas in the presence of a platinum catalyst and high temperature forms nitrogen gas and oxygen gas.
- e) Hydrogen gas and nitrogen monoxide react to form water and nitrogen gas.