H/Chemistry

***Hints:***

* Check your notes from the previous chapters for information about which nonmetal elements form **diatomic molecules – remember the “7” rule...**
* hydrochloric acid = HCl

phosphoric acid = H3PO4

ammonia = NH3

Write a balanced formula equation below each of the following word equations.

Begin by writing the **chemical formulas** for each compound, *then* balance the equation.

1. magnesium bromide(s) + chlorine(g) 🡪 magnesium chloride(s) + bromine(g)

2. sodium(s) + water(l) 🡪 sodium hydroxide(aq) + hydrogen(g)

3. potassium nitrate(s) 🡪 potassium nitrite(s) + oxygen(g)

4. zinc(s) + hydrochloric acid(aq) 🡪 zinc chloride(aq) + hydrogen(g)

5. calcium oxide(s) + hydrochloric acid(aq) 🡪 calcium chloride(aq) + water(l)

6. aluminum nitrate(aq) + ammonium hydroxide(aq) 🡪 aluminum hydroxide(s) + ammonium nitrate(aq)

7. potassium chlorate(s) 🡪 potassium chloride(s) + oxygen(g)

8. phosphoric acid(aq) + magnesium hydroxide(aq) 🡪 magnesium phosphate(aq) + water(l)

9. ammonium nitrite(s) 🡪 nitrogen(g) + water(l)

10. ammonia(g) + oxygen(g) 🡪 dinitrogen trioxide(aq) + water(l)

11. barium chloride(aq) + sodium sulfate(aq) 🡪 sodium chloride(aq) + barium sulfate(s)

12. iron(III) oxide(s) + carbon monoxide(g) 🡪 iron(s) + carbon dioxide(g)

13. magnesium hydroxide(aq) + ammonium phosphate(aq) 🡪 magnesium phosphate(s) + ammonia(aq) + water(l)

14. iron (III) bromide(aq) + ammonium sulfide(aq) 🡪 iron (III) sulfide(s) + ammonium bromide(aq)

15. calcium oxide(s) + diphosphorus pentoxide(g) 🡪 calcium phosphate(s)