Worksheet 6.2 Word Equations

1. Write the chemical equations and balance each of the following word equations.

   a) Aluminum metal reacts with iron (II) oxide powder to produce aluminum oxide solid and iron metal.

   _____

   b) Aluminum sulphate solution and calcium hydroxide solution produce a precipitate of aluminum hydroxide and solid calcium sulphate.

   _____

   c) Ammonia gas (NH_3) plus oxygen gas yields nitrogen monoxide gas plus water vapour.

   _____

   d) Calcium hydroxide solution and carbon dioxide gas yields solid calcium carbonate and liquid water.

   _____

   e) Aqueous iron (III) chloride and sodium carbonate solution yields aqueous sodium chloride and a precipitate of iron (III) carbonate.

   _____

   f) Solid iron (III) oxide and carbon monoxide gas yields iron metal and carbon dioxide gas.

   _____

   g) Magnesium carbonate solution plus aqueous hydrochloric acid (HCl) yields magnesium chloride solution plus liquid water and carbon dioxide gas.

   _____

   h) Silicon dioxide solid plus aqueous hydrofluoric acid (HF) yields solid silicon tetrafluoride plus liquid water.

   _____

   i) Aqueous sodium hydroxide and carbon dioxide gas yields sodium carbonate solution and liquid water.

   _____

Balancing Equations Worksheet

1) ____ Na_3PO_4 + ____ KOH → ____ NaOH + ____ K_3PO_4

2) ____ MgF_2 + ____ Li_2CO_3 → ____ $MgCO_3$ + ____ LiF

3) ____ P_4 + ____ O_2 → ____ P_2O_3

4) ____ $RbNO_3$ + ____ BeF_2 → ____ $Be(NO_3)_2$ + ____ RbF

5) ____ $AgNO_3$ + ____ Cu → ____ $Cu(NO_3)_2$ + ____ Ag

6) ____ CF_4 + ____ Br_2 → ____ CBr_4 + ____ F_2

7) ____ HCN + ____ $CuSO_4$ → ____ H_2SO_4 + ____ $Cu(CN)_2$

8) ____ GaF_3 + ____ Cs → ____ CsF + ____ Ga

9) ____ BaS + ____ PtF_2 → ____ BaF_2 + ____ PtS

10) ____ N_2 + ____ H_2 → ____ NH_3

11) ____ NaF + ____ Br_2 → ____ NaBr + ____ F_2

12) ____ $Pb(OH)_2$ + ____ HCl → ____ H_2O + ____ $PbCl_2$

13) ____ $AlBr_3$ + ____ K_2SO_4 → ____ KBr + ____ $Al_2(SO_4)_3$

14) ____ CH_4 + ____ O_2 → ____ CO_2 + ____ H_2O

15) ____ Na_3PO_4 + ____ $CaCl_2$ → ____ NaCl + ____ $Ca_3(PO_4)_2$

16) ____ K + ____ Cl_2 → ____ KCl

17) ____ Al + ____ HCl → ____ H_2 + ____ $AlCl_3$

18) ____ N_2 + ____ F_2 → ____ NF_3

19) ____ SO_2 + ____ Li_2Se → ____ SSe_2 + ____ Li_2O

20) ____ NH_3 + ____ H_2SO_4 → ____ $(NH_4)_2SO_4$