Quiz 6A

1. Balance the following equations (5 points):
   1. 2 KClO3 (s) 🡪 2 KCl (s) + 3 O2 (g)
   2. As4S6 (s) + 9 O2 (g) 🡪 As4O6 (s) + 6 SO2 (g)
   3. 3 Ba(OH)2 (aq) + 2 Na3PO4 (aq) 🡪 Ba3(PO4)2 (s) + 6 NaOH (aq)
   4. Zn (s) + 2 HCl (aq) 🡪 ZnCl2 (aq) + H2 (g)
2. Identify the type of chemical reaction taking place in each reaction above (4 points).
   1. \_\_\_\_\_\_\_\_\_Decomposition Reaction\_\_\_\_\_\_\_\_\_
   2. \_\_\_\_\_\_\_\_\_Combustion Reaction\_\_\_\_\_\_\_\_\_\_
   3. \_\_\_\_\_\_\_\_\_Double Displacement Reaction\_\_\_\_\_\_\_\_\_
   4. \_\_\_\_\_\_\_\_\_Single Replacement Reaction\_\_\_\_\_\_\_\_\_
3. Write the balanced equation for the reaction of aqueous copper(II) chloride with aqueous sodium hydroxide to produce copper(II) hydroxide solid and aqueous sodium chloride (4 points).

2 NaOH (aq) + CuCl2 (aq) 🡪 2 NaCl (aq) + Cu(OH)2 (s)

1. Which changes are evidence of a chemical reaction (5 points)?
   1. Bubble formation when water is heating. \_\_\_\_\_not evidence\_\_\_\_\_
   2. Dry ice subliming. \_\_\_\_\_not evidence\_\_\_\_\_
   3. A cloudy solution becomes clear upon adding another solution to it. \_\_\_\_\_evidence\_\_\_\_\_
   4. A beaker of water becomes warm to the touch upon adding a salt to it. \_\_\_\_\_evidence\_\_\_\_\_
   5. When fire is observed when sodium metal is added to water. \_\_\_\_\_ evidence\_\_\_\_\_\_
2. What type of chemical reactions will be studied in this week’s lab (2 points)?

Double displacement reactions

Quiz 6B

1. Which changes are evidence of a chemical reaction (5 points)?
   1. Bubble formation on chalk added to acid. \_\_\_\_\_evidence\_\_\_\_\_
   2. Iodine subliming. \_\_\_\_\_not evidence\_\_\_\_\_
   3. A cloudy solution becomes clear upon adding another solution to it. \_\_\_\_\_evidence\_\_\_\_\_
   4. A beaker of water becomes cool to the touch upon adding a salt to it. \_\_\_\_\_evidence\_\_\_\_\_
   5. Bubbles forming in a shaken water bottle. \_\_\_\_\_not evidence\_\_\_\_\_\_
2. Balance the following equations (5 points):
   1. As4S6 (s) + 9 O2 (g) 🡪 As4O6 (s) + 6 SO2 (g)
   2. 2 K3PO4 (aq) + 3 Pb(NO3)2 (aq) 🡪 6 KNO3 (aq) + Pb3(PO4)2 (s)
   3. 2 Al (s) + 6 HBr (aq) 🡪 2 AlBr3 (aq) + 3 H2 (g)
   4. Mg3N2 (s) 🡪 3 Mg (s) + N2 (g)
3. Identify the type of chemical reaction taking place in each reaction above (4 points).
   1. \_\_\_\_\_\_\_\_\_Combustion Reaction\_\_\_\_\_\_\_\_\_\_
   2. \_\_\_\_\_\_\_\_\_Double Displacement Reaction\_\_\_\_\_\_\_\_\_
   3. \_\_\_\_\_\_\_\_\_Single Replacement Reaction\_\_\_\_\_\_\_\_\_
   4. \_\_\_\_\_\_\_\_\_Decomposition Reaction\_\_\_\_\_\_\_\_\_
4. Write the balanced equation for the reaction of aqueous sodium hydroxide with sulfuric acid to give water and aqueous sodium sulfate (4 points).

2 NaOH (aq) + H2SO4 (aq) 🡪 2 H2O (l) + Na2SO4 (aq)

1. What type of chemical reactions will be studied in this week’s lab (2 points)?

Double displacement reactions