**CHE1031: Balanced chemical equations & types of chemical reactions WS**

For each of these chemical reactions:

* Add stoichiometric coefficients to **balance** the equation; and
* Indicate what **type of reaction** is occurring: combination, decomposition, combustion, exchange or displacement/redox.
  + combination A + B 🡪 C
  + decomposition A 🡪 B + C
  + combustion CxHy + O2 🡪 CO2 + H2O
  + displacement/redox A + BX 🡪 AX + B
  + exchange AB + CD 🡪 AD + CB

**reaction type?**

**1.** \_\_\_\_ NaBr + \_\_\_\_ Ca(OH)2 🡪 \_\_\_ CaBr2 + \_\_\_\_ Na(OH)

**2.** \_\_\_\_ NH3+ \_\_\_\_ H2(SO4) 🡪 \_\_\_\_ (NH4)2(SO4)

**3.** \_\_\_\_ C5H9O + \_\_\_\_ O2 🡪 \_\_\_\_ CO2 + \_\_\_\_ H2O

**4.** \_\_\_\_ Pb + \_\_\_\_ H3(PO4) 🡪 \_\_\_\_ H2 + \_\_\_\_ Pb3(PO4)2

**5.** \_\_\_\_ Li3N + \_\_\_\_ (NH4)(NO3) 🡪 \_\_\_ Li(NO3) + \_\_\_ (NH4)3N

**6.** \_\_\_\_ Na3(PO4) + \_\_\_\_ K(OH) 🡪 \_\_\_\_\_ Na(OH) + \_\_\_\_\_ K3(PO4)

**7.** \_\_\_\_ MgCl2 + \_\_\_\_ Li2(CO3) 🡪 \_\_\_\_ Mg(CO3) + \_\_\_\_ LiCl

**8.** \_\_\_\_ C6H12 + \_\_\_\_ O2 🡪 \_\_\_\_ CO2 + \_\_\_\_ H2O

**9.** \_\_\_\_ Pb + \_\_\_\_ Fe(SO4) 🡪 \_\_\_\_ Pb(SO4) + \_\_\_\_ Fe

**10.** \_\_\_\_ Ca(CO3) 🡪 \_\_\_\_ CaO + \_\_\_\_ CO2

**11.** \_\_\_\_ P4 + \_\_\_\_ O2 🡪 \_\_\_\_ P2O3

**12.** \_\_\_\_ Rb(NO3) + \_\_\_\_ BeF2 🡪 \_\_\_\_ Be(NO3)2 + \_\_\_\_ RbF

**13.** \_\_\_\_ Ag(NO3) + \_\_\_\_ Cu 🡪 \_\_\_\_ Cu(NO3)2 + \_\_\_\_ Ag

**14.** \_\_\_\_ C3H6O + \_\_\_\_ O2 🡪 \_\_\_\_ CO2 + \_\_\_\_ H2O

**15.** \_\_\_\_ C5H5 + \_\_\_\_ Fe 🡪 \_\_\_\_ Fe(C5H5)2

**16.** \_\_\_\_ SeCl6 + \_\_\_\_ O2 🡪 \_\_\_\_ SeO2 + \_\_\_\_ Cl2

**17.** \_\_\_\_ MgI2 + \_\_\_\_ Mn(SO3)2 🡪 \_\_\_\_ Mg(SO3) + \_\_\_\_ MnI4

**18.** \_\_\_\_ O3 🡪 \_\_\_\_ O. + \_\_\_\_ O2