**ENTHALPY OF FORMATION**

standard enthalpy of formation – the energy released or absorbed when ***one mole*** of the compound is formed from its ***elements*** in their ***standard states***

standard state – state of matter as it exists in nature at standard conditions (room temperature and pressure) as shown on many periodic tables

Which of the following qualifies as an enthalpy of formation equation?

C(s) + O2(g) → CO2(g) ΔH = −393.5 kJ/mol

SO2(g) + ½O2(g) → SO3(g) ΔH = −98.3 kJ/mol

4Al(s) + 3O2(g) → 2Al2O3(s) ΔH = −3339.6 kJ/mol

½N2(g) + ½O2(g) → NO(g) ΔH = 90.37 kJ/mol

CCl4(l) → C(s) + 2Cl2(g) ΔH = 128.2 kJ/mol

Given the formula of a compound, write the enthalpy of formation equation for it.

1. HC2H3O2(l) b) CaCl2(s)