

## CH1011

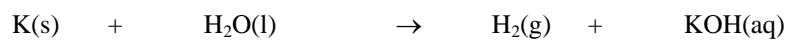
## Tutorial 1

**Name:**

1. Write down the atomic symbol for **carbon-13** include the atomic number and mass number and label these clearly. How many neutrons does this element have?

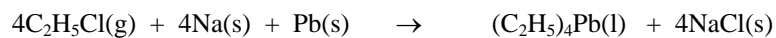
2. What is the first **alkaline earth metal** in the periodic table how many protons does it have?

3. Balance the following equation:



4. Name the following compounds:  $\text{SCl}_6$        $\text{PbO}_2$        $\text{H}_2\text{CO}_3$        $\text{BeCl}_2$

5. Tetraethyllead  $(\text{C}_2\text{H}_5)_4\text{Pb}$  was used extensively as an antiknock additive in gasoline until quite recently (when the lead concentrations in urban areas became too high to be acceptable). The formation of tetraethyllead from chloroethane, sodium and lead is described by the following balanced equation:



How much tetraethyllead would be formed (in kg) from 270.2 kg of chloroethane, 95.3 kg of sodium and 207.2 kg of lead assuming complete reaction?

**Additional information:**

Atomic masses

C 12.0 H 1.0 O 16.0 Cl 35.5 Na 23.0 Fe 55.9 Pb 207.2

