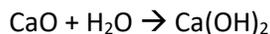


HW 23

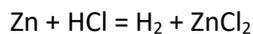
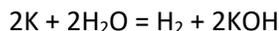
- A. When acidic oxides react with water, they form acids. E.g.:



- A. When basic oxides react with water, they form bases. E.g.:



- B. Active metals (to the left of hydrogen in the metal activity series, see below) react with water or acid producing hydrogen and metal hydroxide or metal salt (if react with acid)



Metal activity series:

Li K Ba Sr Ca Na

Mg Al Zn Cr Fe Cd

Co Ni Sn Pb

H₂ Cu Hg Ag Pd Pt Au

React with cold water

steam of acid

react with steam

react with acid

1. Write down chemical reactions of the following oxides with water: BaO, Li₂O, N₂O₃, and SeO₃.
2. There is an equal number of grams of Zn and Na. Which metal will produce more H₂ in reaction with water? Write down the chemical equation and explain the answer.
3. There are 10 mL of H₂ and 10 mL of O₂ in a close vessel. Which gas will remain in the vessel after the explosion? What will be the volume of the gas under normal conditions?
4. How much water will be needed to obtain concentrated (not diluted) sulfuric acid H₂SO₄ from 224L of SO₃ (under normal conditions)?