

Chemistry 105

Practice Problems - Writing & Balancing Chemical Equations

- 1) Write the balanced chemical equation for the chemical reaction where calcium hydroxide reacts with phosphoric acid in aqueous solution to give solid calcium phosphate plus water.
- 2) Write the balanced chemical equation for the chemical reaction where solid calcium carbonate reacts with an aqueous solution of hydrochloric acid to produce aqueous calcium chloride, carbon dioxide gas and water.
- 3) Write the balanced chemical equation for the aqueous chemical reaction where copper(II)nitrate plus sodium iodide react to form copper(I)iodide plus sodium nitrate plus iodine (I₂).
- 4) Write the balanced chemical equation for the chemical reaction where liquid water reacts with solid tetraphosphorus decaoxide to produce aqueous phosphoric acid.
- 5) The smelting of iron consists of the conversion of iron ore (iron (III) oxide) to metallic iron using heated carbon monoxide gas and producing carbon dioxide gas. Write the balanced chemical equation.
- 6) The burning of gasoline to power internal combustion engines produces water vapor, and carbon dioxide gas that is theorized to contribute to the "Greenhouse Effect" in the earth's atmosphere. Write the balanced chemical equation for burning gasoline (assume octane reacting with oxygen).
- 7) Write the stoichiometric coefficients that balance each of these equations:

