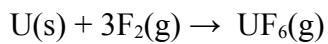**CHM 110 – Gases – Practice Problems**

Solve the problems.

1) 17.5 g of uranium is converted to the gas uranium (VI) fluoride in the following reaction:

$$U(s) + 3F_2(g) \rightarrow UF_6(g)$$

What volume of gas is produced at 0.983 atm by this reaction if the temperature is 50.0 ºC?

•   _____ L UF_6 gas produced.

2) One method for refining iron ore (primarily Fe_2O_3) involves using a blast furnace to react the iron ore with carbon monoxide to produce iron.

$$Fe_2O_3(s) + 3\ CO(g) \rightarrow\ 2\ Fe(s) + 3\ CO_2(g)$$
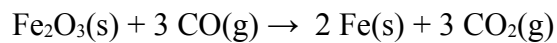
What volume of carbon dioxide gas (at 2.50 atm and 300.0°C) is produced when 6413 grams of pure Fe is made?

- _____ L of CO_2 is produced.

3) What pressure would be produced by 15.5 grams of chlorine gas (Cl_2) contained in a 10.0L container kept at 21.0 ^{o}C?

• _____ atm pressure from the Cl_2.