# Worksheet 2

1. How does a gas differ from a liquid with respect to the following properties? a.) density, b) compressibility, c) ability to mix with other substances of the same phase to form a homogeneous mixture?

2. Perform the following conversions a) 0.850 atm to torr, b) 785 torr to kilopascals, c) 655 mm Hg to atmospheres, d) 2.50 atm to bars.

3. Nitrogen and hydrogen react to form ammonia gas as follows:

$$N_2 \text{ (g)} + 3 H_2 \text{ (g)} \rightarrow 2 NH_3 \text{ (g)}$$
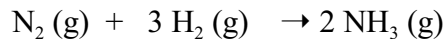
At a certain temperature and pressure, 1.2 L of N_2 reacts with 3.6 L of H_2. If all the N_2 an H_2 are consumed, what volume of NH_3, at the same temperature and pressure will be produced?