Chem 1014
In-Class Problem Set #4
Week of September 20, 1999
Fall 1999

Name_____
TA Name _____
Lab Section #_____

1. In each box below draw the atomic level diagram of the system as described below the box.

A gaseous solution of an element and a compound.	Liquid nitrogen.	A solid compound.

2. Would you expect the black ink in a 'felt' type pen to be a pure substance? Briefly describe an experiment to support your answer.

3. In a container of a gas with a fixed volume no gas can escape or enter the container. If the gas in the container is cooled to a low enough temperature it condenses and forms a liquid. Briefly, explain what is happening as the gas is cooled, and why condensation occurs.

4. Give an example of a homogeneous mixture and a heterogeneous mixture. Describe the difference between a homogeneous mixture and a heterogeneous mixture.