CHE 141 Lecture  Problem Set

1. Corey went to the carnival and his parents bought him two balloons. One balloon was filled with He gas and the other with N₂ gas. After 24 hours the He balloon was half of its original volume. How many hours would it take for the N₂ balloon to reach half of its volume?

2. Suppose you are in a hallway 10 meters long. At one end of the hallway you open a bottle of NH₃. Your friend is at the other end of the hallway and opens a bottle of HCl at the same time. When the HCl combines with the NH₃ you will see a white cloud form.
   a. What is the white cloud?
   b. Where in the hallway does it form?