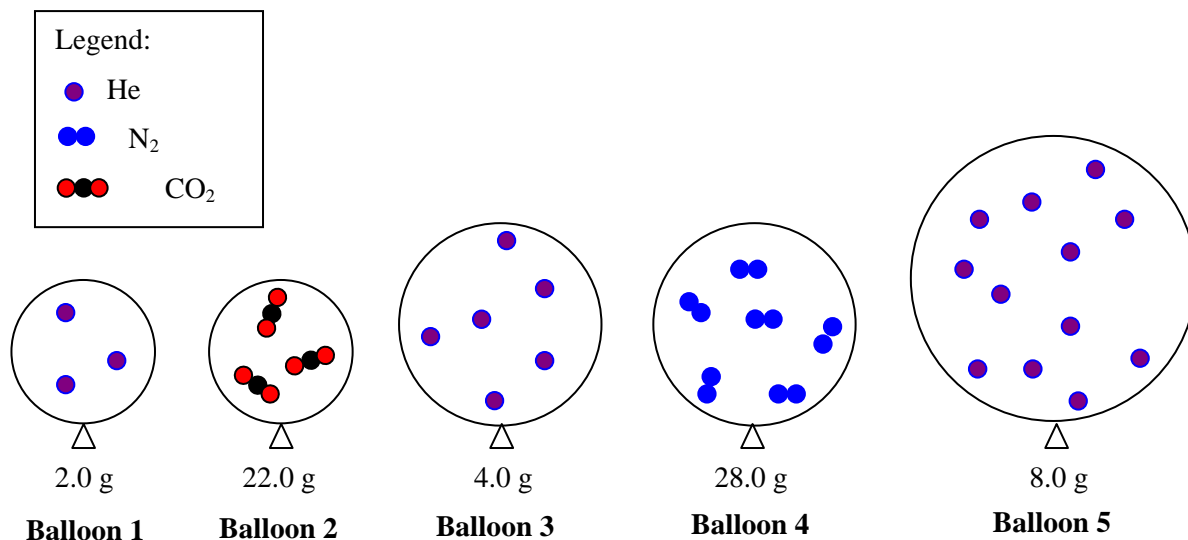


Chem 116, Prof. Sevian
Assignment 1 Extra Problem: Comparing Balloons

Answer the following questions which ask you to compare the five balloons shown in the drawings. These drawings do not show the exact number of gas particles. They simply represent the gas particles in correct proportion to one another.

All five balloons are at the same pressure (1.0 atm) and temperature (273 K). Assume ideal behavior.



- Which balloon has the most gas particles in it?
- Which balloon has the greatest total number of atoms in it?
- The volumes of balloons 3 and 4 are the same. Explain why.
- Why are the masses of balloons 3 and 4 different?
- Let's say you want to create a helium (He) balloon with the same mass as balloon 2. Make a drawing of that balloon using the same proportions as in the drawings above.