

AP Chemistry Daily Videos

3.5 Kinetic Molecular Theory

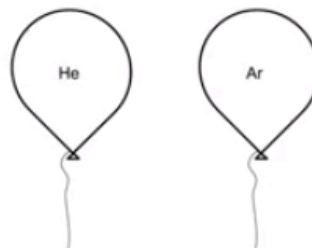
Daily Video #1

1. What do we notice about particles with different masses?
2. What about particles with different volumes?
3. What are the parts of the kinetic molecular theory?
4. Pause the video at 4:45 and attempt the problem, then evaluate how you did and identify any errors

A student sets up an experiment to compare the deflation rate of two different gases. She chooses helium and argon and inflates two identical balloons to the same pressure, volume, and temperature. The student notices that the helium balloon deflates significantly faster and hypothesizes that helium is a smaller gas and can more easily fit in the molecular sized holes of the rubber balloon. Do you agree or disagree with the student's claim? Base your answer on principles of kinetic molecular theory and properties of both gases

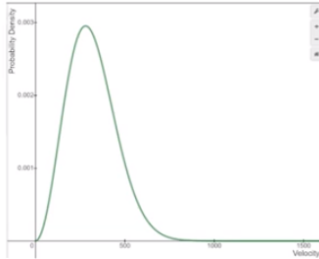


Stop the video and try the problem on your own



Daily Video #2

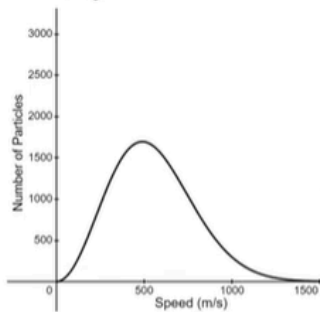
1. What does the Maxwell-Boltzmann distribution show us?



2. How is the distribution different at higher temperatures?

3. How is the distribution different for different masses?

4. Pause the video at 4:23 and attempt the problem, then evaluate how you did and identify any errors



Stop the video and try the problem on your own

The graph above represents particle speed distribution for a gas at a certain temperature. Which of the following graphs uses the dashed blue line to correctly represent the speed distribution of a heavier gas at the same temperature?

Source: desmos.com

