If I heat an enclosed volume of gas so that its Kelvin temperature doubles, what happens to the pressure in the gas?



- 1. It more than doubles.
- 2. It doubles.
- 3. It increases by between 50% and 100%.
- 4. It increases but by less than 50%.
- 5. It stays the same
- 6. It decreases.

10/31/13

If have an enclosed volume of gas and I double the number of molecules, but keep the temperature the same, what happens to the pressure in the gas?



- 1. It more than doubles.
- 2. It doubles.
- 3. It increases by between 50% and 100%.
- 4. It increases but by less than 50%.
- 5. It stays the same
- 6. It decreases.

10/31/13

If I heat an enclosed volume of gas so that its Kelvin temperature doubles, what happens to the average speed of the molecules in the gas?



- 1. It more than doubles.
- 2. It doubles.
- 3. It increases by between 50% and 100%.
- 4. It increases but by less than 50%.
- 5. It stays the same
- 6. It decreases.

10/31/13

Question

- If the molecules in a gas are all moving freely except when they collide with each other (rarely), why don't they fall to the ground?
- Consider a FBD for a gas molecule.
- How far apart are molecules in a gas at STP?
- How fast are they travelling?