**Let’s Practice!**

1. Consider two 1.0 L balloons at STP: one is filled with helium gas and the other with carbon dioxide gas.
   1. Do the atoms in the helium sample have the same average kinetic energy as the atoms in the carbon dioxide sample? Justify your answer.
   2. Do the atoms in the helium sample have the same average velocity as the atoms in the carbon dioxide sample? Justify.
   3. Which balloon will deflate faster? Explain.
2. A real gas will behave most like an ideal gas at:

|  |  |
| --- | --- |
| 1. High T and high P 2. High T and low P | 1. Low T and high P 2. Low T and low P |

1. If 2.0 moles of gas in a sealed glass flask is heated from 25oC to 50oC, which of the following conditions are true?

**Kinetic energy pressure number of moles distance between particles**

1. increases increases stays the same stays the same
2. stays the same increases increases increases
3. decreases stays the same stays the same stays the same
4. increases increases stays the same increases
5. The kinetic molecular theory predicts that pressure rises as the temperature of a gas increases because:
6. the gas molecules collide more frequently with the wall
7. the gas molecules collide less frequently with the wall
8. the gas molecules collide more energetically with the wall
9. the gas molecules collide more frequently and more energetically with the wall
10. Which of the following is not part of KMT?
11. Atoms are neither created nor destroyed by ordinary chemical reactions.
12. Attractive and repulsive forces between gas molecules are negligible.
13. Collisions between gas molecules do not result in the loss of energy.
14. The volume occupied by all of the gas molecules in a container is negligible compared to the volume of the container.