

Research Statements

Use evidence from the MoLE simulation to prove or disprove the following assertions.

1. The pressure exerted by a combination of gases is equal to the sum of the pressure exerted by the individual gases.
2. The speed of a gas particle increases with increasing pressure when the volume is decreased.
3. The pressure exerted by a gas depends on its molar mass.
4. The speed of a gas particle depends on its molar mass.
5. The kinetic energy of a gas particle depends on its molar mass.
6. The collision of a gas particle with the walls of its container does not effect its speed.
7. The collision of a gas particle with another gas particle does not effect its speed.
8. The average speed of two like gas particles before a collision is equal to the average speed after the collision.
9. The average speed of two unlike gas particles before a collision is equal to the average speed after the collision.