

## Kinetic Molecular Theory (Kmt)

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| <p>1 Which statement describes the particles of an ideal gas, based on the kinetic molecular theory?</p> <ol style="list-style-type: none"> <li>(1) There are attractive forces between the particles.</li> <li>(2) The particles move in circular paths.</li> <li>(3) The collisions between the particles reduce the total energy of the gas.</li> <li>(4) The volume of the gas particles is negligible compared with the total volume of the gas.</li> </ol> <p>2 According to the kinetic molecular theory, which statement describes the particles in a sample of an ideal gas?</p> <ol style="list-style-type: none"> <li>(1) The particles are constantly moving in circular paths.</li> <li>(2) The particles collide, decreasing the total energy of the system.</li> <li>(3) The particles have attractive forces between them.</li> <li>(4) The particles are considered to have negligible volume.</li> </ol> <p>3 Which statement describes the particles of an ideal gas, based on the kinetic molecular theory?</p> <ol style="list-style-type: none"> <li>(1) The volume of the particles is considered negligible.</li> <li>(2) The force of attraction between the particles is strong.</li> <li>(3) The particles are closely packed in a regular, repeating pattern.</li> <li>(4) The particles are separated by small distances, relative to their size.</li> </ol> <p>4 Which phrase describes the motion and attractive forces of ideal gas particles?</p> <ol style="list-style-type: none"> <li>(1) random straight-line motion and no attractive forces</li> <li>(2) random straight-line motion and strong attractive forces</li> <li>(3) random curved-line motion and no attractive forces</li> <li>(4) random curved-line motion and strong attractive forces</li> </ol> | <p>5 The kinetic molecular theory states that all particles of an ideal gas are</p> <ol style="list-style-type: none"> <li>(1) colliding without transferring energy</li> <li>(2) in random, constant, straight-line motion</li> <li>(3) arranged in a regular geometric pattern</li> <li>(4) separated by small distances relative to their size</li> </ol> <p>6 According to kinetic molecular theory, which statement describes one characteristic of an ideal gas system?</p> <ol style="list-style-type: none"> <li>(1) The distance between gas molecules is smaller than the diameter of one gas molecule.</li> <li>(2) The attractive force between two gas molecules is strong.</li> <li>(3) The energy of the system decreases as gas molecules collide.</li> <li>(4) The straight-line motion of the gas molecules is constant and random.</li> </ol> <p>7 Which statement describes particles of an ideal gas, based on the kinetic molecular theory?</p> <ol style="list-style-type: none"> <li>(1) Gas particles are separated by distances smaller than the size of the gas particles.</li> <li>(2) Gas particles do not transfer energy to each other when they collide.</li> <li>(3) Gas particles have no attractive forces between them.</li> <li>(4) Gas particles move in predictable, circular motion.</li> </ol> <p>8 According to kinetic molecular theory, collisions between gas particles in a sample of an ideal gas</p> <ol style="list-style-type: none"> <li>(1) increase the energy content of the gas sample</li> <li>(2) produce strong attractive forces between the gas particles</li> <li>(3) result in a net loss of energy by the gas sample</li> <li>(4) transfer energy between the gas particles</li> </ol> |
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- 9 According to the kinetic molecular theory, which statement describes an ideal gas?
- (1) The gas particles are diatomic.
  - (2) Energy is created when the gas particles collide.
  - (3) There are no attractive forces between the gas particles.
  - (4) The distance between the gas particles is small, compared to their size.
- 10 According to the kinetic molecular theory for an ideal gas, all gas particles
- (1) are in random, constant, straight-line motion
  - (2) are separated by very small distances relative to their sizes
  - (3) have strong intermolecular forces
  - (4) have collisions that decrease the total energy of the system
- 11 According to the kinetic molecular theory, which statement describes the particles of an ideal gas?
- (1) The gas particles are arranged in a regular pattern.
  - (2) The force of attraction between the gas particles is strong.
  - (3) The gas particles are hard spheres in continuous circular motion.
  - (4) The collisions of the gas particles may result in the transfer of energy.
- 12 Which statement describes the particles of an ideal gas, based on the kinetic molecular theory?
- (1) The motion of the gas particles is orderly and circular.
  - (2) The gas particles have no attractive forces between them.
  - (3) The gas particles are larger than the distances separating them.
  - (4) As the gas particles collide, the total energy of the system decreases.
- 13 Which statement describes the particles of an ideal gas according to the kinetic molecular theory?
- (1) The gas particles are arranged in a regular geometric pattern.
  - (2) The gas particles are in random, constant, straight-line motion.
  - (3) The gas particles are separated by very small distances, relative to their sizes.
  - (4) The gas particles are strongly attracted to each other.

## Answer Keys

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