

## Kinetic Molecular Theory (KMT) Worksheet



Name: KEY Period: \_\_\_\_\_ Date: \_\_\_\_\_

Directions: Answer the following questions completely and concisely.

1. What is kinetic energy?

energy of motion

2. Describe the 3 assumptions of the KMT (Kinetic Molecular Theory).

- matter made up of particles
- particles in constant motion
- collisions between particles are elastic

3. According to the KMT, "collisions between particles are perfectly elastic". What does that mean?

total amount of KE stays the same

4. Describe the particle motion of solids, liquids, and gases.

solids vibrate in place  
liquids flow around a specific point  
gases freely move

5. How would **increasing** the temperature affect kinetic energy of molecules?

this increases the kinetic energy  
(they move faster)

6. How would **decreasing** the temperature affect kinetic energy of molecules?

this decreases the kinetic energy  
(they move slower)

7. Compare the average kinetic energies of solids, liquids, gases, and plasma.

solids                  liquids                  gases                  plasma

least KE                  —————>                  most KE