

## **Review of Science 8 - The Atom and Kinetic Molecular Theory**

Name (first and last name): \_\_\_\_\_

### **Part A: The Atom**

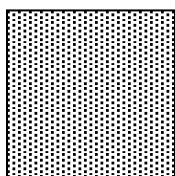
1. Definition: What is an Atom?
  
  
  
  
  
  
  
  
  
  
2. Draw a sketch of an atom and label all the parts. *Include: Protons, Neutrons, Electrons*
  
  
  
  
  
  
  
  
  
  
3. What is the relationship between Quarks, Protons, and Neutrons? (show in a diagram, or explain in words)

### **Part B: Kinetic Molecular Theory (KMT)**

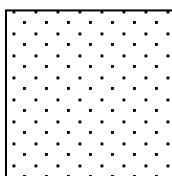
4. **Circle** all the statements below that are TRUE, according to the *Kinetic Molecular Theory*
  - a) Atoms can join together to form molecules.
  - b) All matter is made of particles.
  - c) There is only one kind of molecule.
  - d) All particles are constantly in motion.
  
5. The term “**kinetic**” means (circle the one correct answer):

a) Silent	c) Stationary (not moving)
b) Chemical	d) Motion
  
6. What does the term “**kinetic**” refer to in the Kinetic Molecular Theory?
  
  
  
  
  
  
  
  
  
  
7. What does the term “**molecular**” mean in the Kinetic Molecular Theory? (i.e. What is a molecule?)

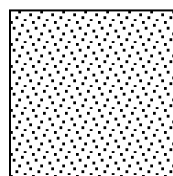
8. What does the term “**theory**” mean, in the Kinetic Molecular Theory? (i.e. What is a theory? How is it different from a “fact”?)
9. What happens to the **speed** of particles when temperature increases? (Does speed increase? Decrease? Stay the same?)
10. The diagrams below show the particles of materials in different states. Below each diagram write which state it represents (solid, liquid, or gas):



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

11. Which state of matter (solid, liquid, or gas) has the **strongest bonds** between particles?  
\_\_\_\_\_
12. Which state of matter (solid, liquid, or gas) has the **weakest bonds** between particles?  
\_\_\_\_\_
13. If you open a bottle of perfume and leave it in the corner of a room, the smell gradually spreads throughout the room. Why?

14. Why does a balloon get bigger when it is heated?