

Weekly Review #1: 1/23-1/27

States of Matter, Phase Changes and KMT:

1. State of matter with a definite volume but no definite shape: _____
2. State of matter with a definite volume and a definite shape: _____
3. State of matter with no definite volume and no definite shape: _____
4. State of matter that has the highest kinetic energy: _____
5. State of matter that has the lowest kinetic energy: _____
6. State of matter that has the least space between particles: _____
7. State of matter with the strongest intermolecular force: _____
8. State of matter with the weakest intermolecular force: _____
9. Write the equation for the phase changes below and identify whether it is an exothermic or endothermic process. Make sure to include energy in your equation.
 - a. Water boiling
 - b. Sublimation of carbon dioxide
 - c. Water freezing
10. State the parts of KMT

Properties of Gases:

11. What unit is used to measure temperature of gases? _____
12. What unit is used to calculate with temperature values? _____
13. Convert 25°C to Kelvin. _____
14. Convert 280K to $^{\circ}\text{C}$. _____
15. What are the values for STP?
16. What is the atmospheric pressure if the partial pressures of nitrogen, oxygen and argon are 604.5 mm Hg , 162.8 mm Hg and 0.5 mm Hg ?
17. Why is it necessary to inflate your tires when the seasons change (temperature change)?
18. Explain Why a potato chip bag can “pop” when left in a car on a hot summer day.

Combined Gas Law:

1. If I initially have 4.0 L of a gas at a pressure of 1.1 atm, what will the volume be if I increase the pressure to 3.4 atm?

2. A bag of potato chips is packaged at sea level (1.00 atm) and has a volume of 315 mL. If this bag of chips is transported to Denver (0.775 atm), what will the new volume of the bag be?