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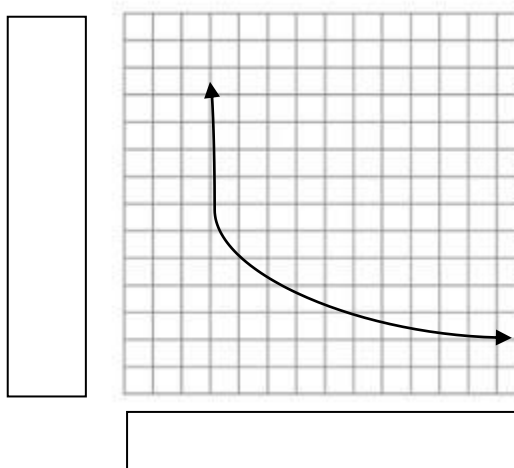
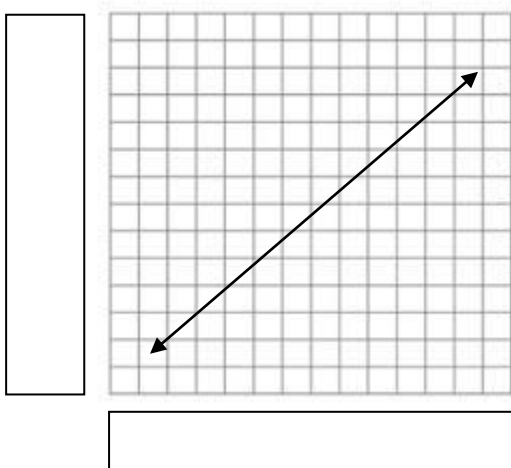
Grade/Class: \_\_\_\_\_

## Chapter 10 Review – Behavior of Gases

1. What is the temperature and pressure at standard temperature and pressure (STP)?
2. What volume does 1 mole of a gas occupy at STP?
3. At 3.0 atm, a fixed amount of gas is in a 7.5 L container. If the volume is compressed to 6.0 L, what is the resulting pressure (in atm)? (Assume constant temperature)
4. What volume will a sample of hydrogen occupy at 24.0 °C if the gas occupies a volume of 2.91 L at a temperature of 1.5 °C? (Assume constant pressure)
5. What is the resulting pressure of a 23.0 L gas at 22.1 kPa and 37.0 °C that expands to a volume of 29.1 L at 39.5 °C? (Answer in kPa)
6. What is the volume occupied by 1.00 mole of CO at 700 °C and 0.10 atm?
7. What mass of oxygen gas occupies a volume of 4.50 L at 39.0°C and a pressure of 1.45 atm?

8. If 3.94 g of Mg metal is reacted with excess oxygen in a 47.0 L container at 1.0 atm, what will be the temperature of the gas?

9. Identify which of the following graphs is Temperature vs Pressure and which is Volume vs Temperature. Label the axes of each graph with the variable and a possible unit for that variable.



10. Explain how the postulates of Kinetic Molecular Theory help **explain** Charles' Law and Boyle's Law.

a. Charles' Law

b. Boyle's Law