

Name _____ Period _____ Date _____

Chapter 11 Practice sheet for Quiz (without calculations) Behavior of Gases

- 1) Cross out the statement that is **not** part of the basic assumption of the kinetic theory of gases.
- Gases are composed of tiny particles; in-between is empty space without attractive forces between them.
 - Gases always combine in small whole number ratios.
 - Gas particles constantly travel fast in a straight line.
 - All collisions are perfectly elastic, which means that the total kinetic energy remains the same.

2) Which property is explained

a) by the collision of gas molecules with the walls of its container? _____

b) by the collisions of air molecules with objects? _____

3) What temperature is known as standard temperature when calculating gases? _____

4) The standard pressure that represents the average air pressure at sea level is _____

5) What is the abbreviation for "standard temperature and standard atmospheric pressure"? _____

6) When calculating Charles' law, always use which temperature scale? _____

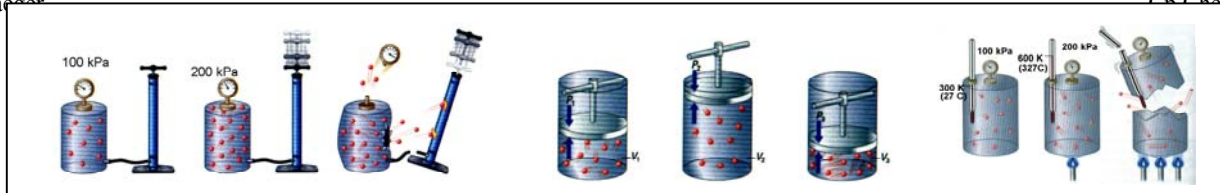
7) Which four properties influence conditions of a gas: _____

8) How does the pressure change when only one variable changes?

Variable	Pressure increases or decreases?	Relationship Direct or inverse?
Number of particles increases		
Number of particles decrease		
Temperature increases		
Temperature decreases		
Volume increases		
Volume decreases		

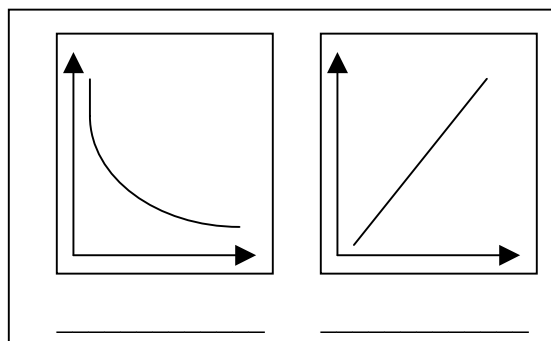
9) A barometer is used to measure _____

10) Explain how Toricelli's barometer works _____



- 11) If the amount of gas in a rigid container is doubled, the pressure will _____
- 12) The volume of a gas is doubled while the temperature and # of particles is held constant. How does the gas pressure change? _____
- 13) With pressure constant, the temperature of a gas is increased from 30 °C to 90 °C. The volume will
 a. decrease b. increase c. remain the same
- 14) As the temperature of a fixed volume of a gas increases, the pressure will _____.
- 15) As the temperature of the gas in a balloon decreases its volume will _____
- 16) As the temperature of the gas decreases the average kinetic energy of the gas particles _____
- 17) If you pump more air into a soccer ball, will the mass of the ball increase? _____
- 17) The combined gas law relates which three properties? _____
- 18) Complete Avogadro’s principle: At equal temperatures and equal pressures, equal volumes of gases contain equal _____
- 19) Explain the term “absolute zero” _____

Compare the two graphs on the right: Which represents
 a) a direct proportion b) an inverse proportion
 c) Boyle’s Law, and d) Charles’ Law?



Explain the meaning of “inversely proportional”

Explain the meaning of “directly proportional”

Balance the equation, **and write a statement** of how many liters of gases are needed and produced relatively.

