

**WKS**  
**Gas Pressure & Dalton's Law**

**NAME** \_\_\_\_\_  
**Period** \_\_\_\_\_ **Date** \_\_\_\_\_

Pressure at sea level and 0°C:  
1 atm = 760 mm Hg = 760 torr = 101.3 kPa

1. What is the definition of pressure? What two properties can we change to change pressure?
2. What causes pressure in a container of a gas?
3. What causes atmospheric pressure?
4. Describe the forces that held the hemispheres or the “suction” cups together. Be sure to contrast what is inside and outside the containers.
5. What is the device used to measure atmospheric pressure? What must be true about the weight of the liquid inside the device? Why does the height of the liquid not depend on the diameter of the tube?
6. What is the device used to measure pressure in a laboratory container?
7. The air pressure for a certain tire is 109 kPa. What is this pressure in atmospheres (atm)?
8. The air pressure inside a submarine is 0.62 atm. What would be the height of a column of Hg supported by this pressure?
9. An experiment is performed at an atmospheric pressure of 758.5 mm Hg. What is the pressure in atm?

10. A bag of potato chips is sealed in a factory near sea level at a pressure of 761.3 mm Hg. What is the pressure inside the bag in kPa?
  
11. A mixture of neon and argon gases exerts a total pressure of 2.39 atm. The partial pressure of the neon alone is 1.84 atm, what is the partial pressure of the argon?
  
12. What is the total pressure of a mixture of gases made up of CO<sub>2</sub>, O<sub>2</sub> and H<sub>2</sub> if the partial pressures are 22.3 kPa, 44.7 kPa and 112 kPa respectively?
  
13. Find the partial pressure of carbon dioxide in a gas mixture with a total pressure of 30.4 kPa if the partial pressures of the other two gases in the mixture are 16.5 kPa and 3.7 kPa.
  
14. Explain how changes in atmospheric pressure affect the height of the column of mercury in a barometer.