

GHS HONORS CHEMISTRY  
GAS LAWS WORKSHEET 2  
THE IDEAL GAS LAW(S)

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_ BLOCK: \_\_\_\_\_

1. Determine the densities of 1.0 mole of the following gases at the indicated conditions:
  - a) Sulfur (IV) oxide,  $\text{SO}_2$ , at 2.0 atmospheres and 20.0 C
  
  - b) Carbon dioxide,  $\text{CO}_2$ , at 800.0 mm of Hg and 50.0 C
  
  - c) Nitrogen gas,  $\text{N}_2$ , at 202.6 kPa of Hg and 10.0 C
  
2. Calculate the volume in liters of 4.0 moles of oxygen gas at a temperature of 40.0 C and a pressure of 500.0 mm of Hg.
  
  
  
  
  
  
  
  
  
  
3.  $1.2 \times 10^{24}$  molecules of xenon gas occupy a volume of 20.0 liters at a temperature of 60.0 C. Determine the pressure in millimeters of Hg.
  
  
  
  
  
  
  
  
  
  
4. If  $5.0 \times 10^{-2}$  moles of neon gas have a volume of 200.0 ml at a pressure of 50.0 mm of Hg, then calculate the centigrade temperature.