

Name \_\_\_\_\_

Combined Gas Law-  $\frac{VP}{T} = \frac{VP}{T}$

Ideal Gas law-  $PV = nRT$

1. Do this problem with the **combined gas law** and show work. Calculate what volume 38.4 mL of nitrogen gas at 44° C under 45 kPa will occupy at 98 kPa and 19° C.
  
2. Do this problem with the **ideal gas law** and show work. Calculate what volume 38.4 mL of nitrogen gas at 44° C under 45 kPa will occupy at 98 kPa and 19° C. (Yes, I realize it is the same problem)
  
3. Do this problem with the **combined gas law** and show work. Calculate what volume 1.5 mole of hydrogen sulfide gas will occupy at 1.28 atm and 102° C.
  
4. Do this problem with the **ideal gas law** and show work. Calculate what volume 1.5 mole of hydrogen sulfide gas will occupy at 1.28 atm and 102° C.

5. Do this problem with the **combined gas law** and show work. What volume will 239.3 g of XeF<sub>4</sub> gas occupy at 711 torr and 254 K?

6. Do this problem with the **ideal gas law** and show work. What volume will 239.3 g of XeF<sub>4</sub> gas occupy at 711 torr and 254 K?



7. Balance the above equation. Do this problem with the **combined gas law** and show work. What volume of carbon dioxide will be released by the combustion 579.3 g of C<sub>8</sub>H<sub>18</sub> gas occupy at 94 torr and 459 K?



8. Balance the above equation. Do this problem with the **ideal gas law** and show work. What volume of carbon dioxide will be released by the combustion 579.3 g of C<sub>8</sub>H<sub>18</sub> gas occupy at 94 torr and 459 K?