

## Gas Law Worksheet 1

$$\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2} \quad \text{Name of equation: } \underline{\hspace{10cm}}$$

$$PV = nRT \quad \text{Name of equation: } \underline{\hspace{10cm}}$$

Write the equation used to convert from Celsius degrees to Kelvin:  $\underline{\hspace{10cm}}$

Write down the values of standard temperature and pressure (STP):

1. Rewrite the combined gas law as if you are solving for  $P_2$ .

$$P_2 =$$

2. Rewrite the combined gas law as if you are solving for  $V_1$ .

$$V_1 =$$

3. Rewrite the ideal gas law as if you are solving for  $n$ .

$$n =$$

4. Rewrite the ideal gas law as if you are solving for  $V$ .

$$V =$$

5. Write down two reasonable values for  $R$ :

Questions 6 - 12. Write down all variables and what values you are given for them. Indicate which variable you are solving for. Also write down the general equation.

6. Solve for the final volume given: The gas inside of a flexible container at  $25^\circ\text{C}$  has a pressure of 0.25 atm. The size of the container starts out holding 3 L of gas. When it is heated to  $30^\circ\text{C}$ , its pressure is also increased to 0.27 atm. What happened to the volume of the container?

$$P_1 =$$

$$V_1 =$$

$$T_1 =$$

$$P_2 =$$

$$V_2 =$$

$$T_2 =$$