Boyle's Law	Charles' Law	Guy-Lassac's Law	Combined Gas Law
For a given mass of gas at constant temperature, the volume of a gas varies inversely with pressure	The volume of a fixed mass of gas is directly proportional to its Kelvin temperature if the pressure is kept constant.	The pressure of a gas is directly proportional to the Kelvin temperature if the volume is kept constant.	Combines Boyle's, Charles', and the Temperature-Pressure relationship into one equation. Each of these laws can be derived from this law.
$PV = k$ $$P_1V_1 = P_2V_2$$	$$\frac{V}{T} = k$$ $$V_1T_2 = V_2T_1$$ $$\frac{V_1}{T_1} = \frac{V_2}{T_2}$$	$$\frac{P}{T} = k$$ $$P_1T_2 = P_2T_1$$ $$\frac{P_1}{T_1} = \frac{P_2}{T_2}$$	$$\frac{PV}{T} = k$$ $$V_1P_1T_2 = V_2P_2T_1$$ $$\frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$$

Dalton's Law	Ideal Gas Law	Graham's Law
At constant volume and temperature, the total pressure exerted by a mixture of gases is equal to the sum of the pressures exerted by each gas,	The Ideal Gas Law relates the pressure, temperature, volume, and mass of a gas through the gas constant "R".	The rate of effusion/diffusion of two gases (A and B) are inversely proportional to the square roots of their formula masses. [*It can be a ratio of molecular speeds, effusion /diffusion times, distance traveled by molecules, or amount of gas effused*]
$$P_{total} = P_1 + P_2 + P_3 + ...P_n$$	$$PV = nRT$$	$$\frac{Rate_A}{Rate_B} = \frac{\sqrt{molar\ mass_B}}{\sqrt{molar\ mass_A}}$$

Abbreviations	Standard Conditions
atm = atmosphere mm Hg = millimeters of mercury torr = another name for mm Hg Pa = Pascal kPa = kilopascal K = Kelvin °C = degrees Celsius	0°C = 273 K 1.00 atm = 760.0 mm Hg = 76 cm Hg =101.325 kPa = 101, 325 Pa = 29.9 in Hg
Conversions	**Gas Law's Equation Symbols**
$K = °C + 273$ $F° = 1.8C° + 32$ $$C° = \frac{F° - 32}{1.8}$$ 1 cm^3 (cubic centimeter) = 1 mL (milliliter) 1 dm^3 (cubic decimeter) = 1 L (liter) = 1000 mL	Subscript (1) = old condition or initial condition Subscript (2) = new condition or final condition Temperature must be in Kelvins n = number of moles = grams/Molar mass R = 8.31 L-kPa/ mol-K = 0.0821 L-atm/mol-K = 62.4 L-Torr/mol-K You must have a common set of units in the problem