Conversions	
1 <u>atm</u> =	1.01325 x 10⁵ Pa
	101.325 kPa
	760 mmHg
	760 <u>torr</u>
	14.7 psi

Boyle's Law

- $P_1V_1 = P_2V_2$
- Temperature and # moles held constant Indirect (or inverse) relationship If pressure goes \

Then volume goes



Charles' Law

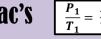
$$\boxed{\frac{V_1}{T_1} = \frac{V_2}{T_2}}$$

- Pressure and # moles held constant
- Direct relationship If temperature goes 1 Then volume goes ↑



note Graph doesn't go all the way to zero because the molecules will eventually get as close as possible and they will still always take up space

Gay-Lussac's



Volume and # moles held constant

Law

Direct relationship If temperature goes 1 Then pressure goes 1



note Graph doesn't go all the way to zero because at low temperatures and pressures it won't be a gas anymore, it will turn into a solid or a liquid. We use dotted line to show the portions that are not gas phase

Avogadro's Law

$$\frac{V_1}{n_1} = \frac{V_2}{n_2}$$

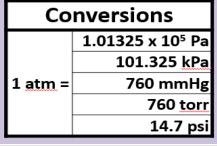
- Pressure and temperature held constant
- Direct relationship If # of moles goes 1 Then volume goes 1



Combined Gas

$$\frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$$

- # of moles held constant
- Combines most common variables together - not common to change moles of gas



Boyle's Law



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- Indirect (or inverse) relationship If pressure goes \

Then volume goes

Charles' Law



- Pressure and # moles held constant
- Direct relationship If temperature goes \ Then volume goes ↑



note Graph doesn't go all the way to zero because the molecules will eventual get as close as possible and they will still always take up space

Gay-Lussac's Law



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note Graph doesn't go all the way to zero because pressures it won't be a gas anymore, it will turn int dotted line to show the portions that are not gas pl

Avogadro's Law

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- Direct relationship If # of moles goes 1 Then volume goes 1



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