

- **Hydrogen gas exerts a pressure of 466 torr in a container. What is this pressure in atmospheres?**

A) 0.217 atm B) 0.466 atm C) 0.613 atm D) 1.63 atm E) 4.60 atm

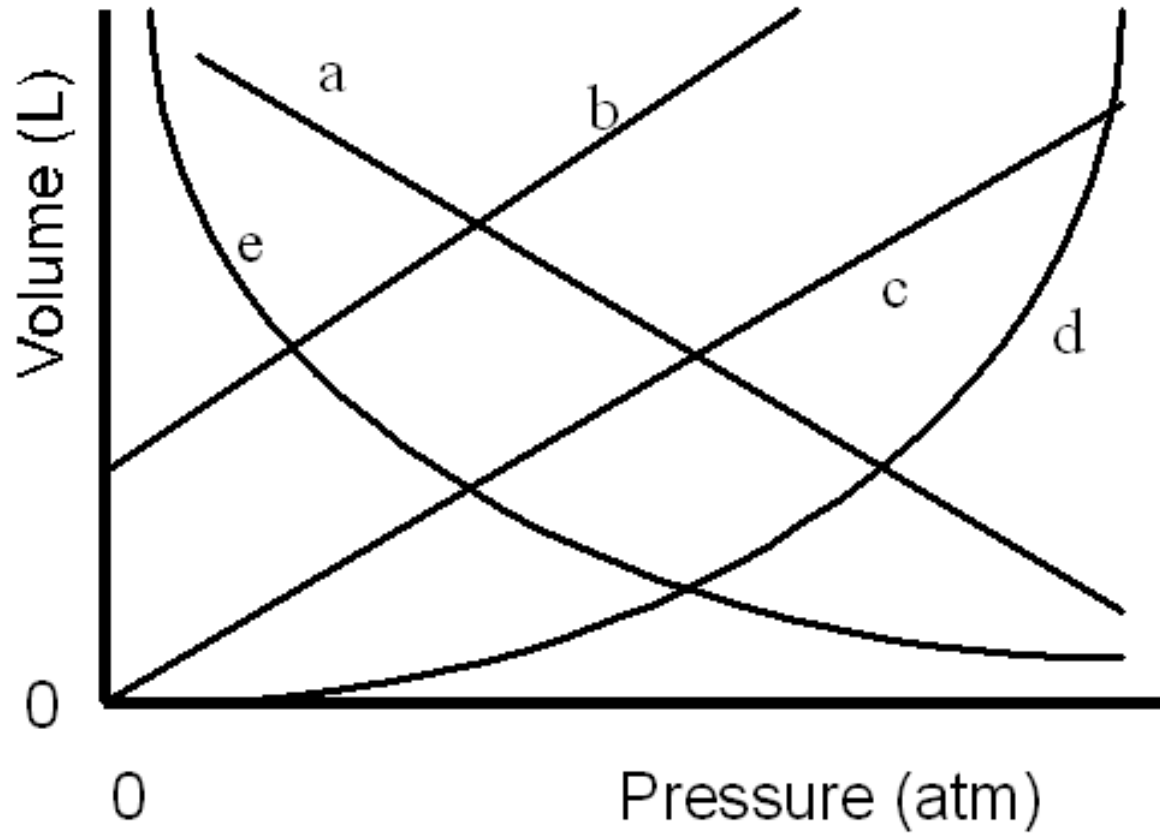
The volume of an ideal gas is directly proportional to the number of moles of the gas at constant temperature and pressure" is a statement of _____ Law.

A) Charles' B) Boyle's C) Amontons' D) Avogadro's E) Dalton's

The total pressure in a mixture of unreacting gases is equal to the sum of the partial pressures of the individual gases" is a statement of _____ Law.

A) Charles' B) Graham's C) Boyle's D) Avogadro's E) Dalton's

Which of the lines on the figure below is the best representation of the relationship between the volume of a gas and its pressure, other factors remaining constant?



- A) a B) b C) c D) d E) e

- A sample of the inert gas krypton has its pressure tripled while its temperature remained constant. If the original volume is 12 L, what is the final volume?
A) 4.0 L B) 6.0 L C) 9 L D) 36 L E) 48 L
- A sample of carbon dioxide gas at 125°C and 248 torr occupies a volume of 275 L. What will the gas pressure be if the volume is increased to 321 L at 125°C?
A) 212 torr B) 289 torr C) 356 torr D) 441 torr E) 359 torr

What are the conditions of STP?

- A) 0 K and 1 atm D) 273.15°C and 760 torr
- B) 273.15 K and 760 torr E) None of these choices is correct.
- C) 0°C and 760 atm

- A sample of nitrogen gas is confined to a 14.0 L container at 375 torr and 37.0°C. How many moles of nitrogen are in the container?
A) **0.271 mol** B) 2.27 mol C) 3.69 mol D) 206 mol E) 227 mol
- What is the density of carbon dioxide gas at -25.2°C and 98.0 kPa?
A) 0.232 g/L B) 0.279 g/L C) 0.994 g/L D) 1.74 g/L E) **2.09 g/L**
- A 250.0-mL sample of ammonia, $\text{NH}_3(\text{g})$, exerts a pressure of 833 torr at 42.4°C. What mass of ammonia is in the container?
A) 0.0787 g B) **0.180 g** C) 8.04 g D) 17.0 g E) 59.8 g

- Magnesium metal (0.100 mol) and a volume of aqueous hydrochloric acid that contains 0.500 mol of HCl are combined and react to completion. How many liters of hydrogen gas, measured at STP, are produced?



- A) 2.24 L of H₂ D) 11.2 L of H₂
B) 4.48 L of H₂ E) 22.4 L of H₂
C) 5.60 L of H₂