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The graph of the gas at 17°C, show more deviations from ideal behavior than at 100°C. Moreover, the extent of deviation of these gases is more prominent at high pressures. We draw an important conclusion from the above graphs. The gases are comparatively ideal at high temperature and low pressures. **Non-Ideal Gas Behavior | Chemistry for Majors** For gases such as hydrogen, oxygen, nitrogen, helium, or neon, deviations from the ideal gas law are less than 0.1 percent at room temperature and atmospheric pressure. Other gases, such as carbon dioxide or ammonia, have stronger intermolecular forces and consequently greater deviation from ideality. **1.3 Deviation from ideal gas behaviour** The deviations from ideal gas behaviour can be illustrated as follows: The isotherms obtained by plotting pressure, P against volume, V for real gases do not coincide with that of ideal gas, as shown below. It is clear from above graphs that the volume of real gas is more than or less than expected in certain cases. Deviations from the Ideal Gas Law - Purdue University Which noble gas is expected to show the largest deviations from the ideal gas behavior? xenon. The temperature and pressure specified by STP are ___ °C and ___ atm. 0 °C and 1 atm. Standard temperature and pressure (STP), in the context of gases, refers to ___ . 273.15 K and 1 atm.

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Gases most closely approximate ideal gas behavior at high temperatures and low pressures. Deviations from ideal gas law behavior can be described by the van der Waals equation, which includes empirical constants to correct for the actual volume of the gaseous molecules and quantify the reduction in pressure due to intermolecular attractive forces.

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