

Directions: Choose the letter that corresponds to the correct answer.

- In which of the following scenarios will a certain gas most probably behave ideally?
 - high temperature and high pressure
 - high temperature and low pressure
 - low temperature and high pressure
 - low temperature and low pressure
- What variable/s is/are held constant in Amonton's law?
 - temperature and amount of gas
 - pressure and amount of gas
 - volume and amount of gas
 - volume and temperature
- Which of the following statements is/are TRUE?
 - A one-degree change in Kelvin scale is equal to a one-degree change in Celcius scale.
 - Increasing the pressure applied to an ideal gas causes compression with no change in temperature.
 - Increasing the temperature of an ideal gas causes expansion if pressure is held constant.
 - All of the above
 - None of the above
- A helium-filled balloon was released from Earth's surface at a temperature of 17 °C, pressure of 756 mmHg, and volume of 20 L. What will be its new volume 20 miles above ground, where the temperature is -33 °C and pressure of 75 mmHg? Assume no helium gas escapes from the balloon.
 - $\frac{(75)(20)(-33)}{(17)(756)} L$
 - $\frac{(756)(20)(-33)}{(17)(75)} L$

- c. $\frac{(756)(20)(240)}{(290)(75)} L$
- d. $\frac{(75)(20)(240)}{(290)(756)} L$
5. What pressure is required for a mole of an ideal gas to occupy a volume of 2 L at 300 K?
- 100R
 - 150R
 - 200R
 - 300R