

Gas Laws

Connect the following questions to their correct answer.

An inflated balloon has a volume of 0.55 L at sea level of 1.0 atm. When it rise to a height where the pressure is 0.40 atm, what is the final volume of the balloon?

0.5 L

When a huge balloon is filled with helium gas, the volume of the balloon is 20 L at 87 °C. What is the final volume of the balloon when it is cooled to 27 °C?

0.08 mol

A sample of nitrogen gas occupies a volume of 2.5 L at 180 kPa. What would be the pressure if the volume of the gas is decreased to 0.3 L under the same temperature?

16.67 L

At 273 K, a sample of gas has a volume of 450 cm³. What volume would it occupy at 30 °C under the same pressure?

1500 kPa

At STP, 1 mol gas occupies 22.4 dm³. Calculate the final mol of Oxygen gas when it occupies 1800 cm³.

1.375 atm

BONUS

The pressure of 8.40 L of an unknown gas in a flexible container is decreased to one third of its original pressure. What is the final volume if the temperature is constant?

WRITE YOUR ANSWER HERE: L