

Mixed Gas Law Problems

Directions: 1) Identify each number with P, V, or T.

2) State **whose** law you are using,

3) Show the **equation**,

4) Solve the problem,

5) Put your answer in the box and make sure you don't forget your units!!!

"Standard" or "STP"

P = 1 atm

T = 0°C (273K)

1	The gas in a sealed can is at a pressure of 3.00 atm at 25°C. A warning on the can tells the user not to store the can in a place where the temperature will exceed 52°C. What would the gas pressure in the can be at 52°C?		
	P, V or T values	Law	Equation
	Work:		Answer
2	A sample of hydrogen exerts a pressure of 0.329 atm at 47°C. The gas is heated 77°C at constant volume. What will its new pressure be?		
	P, V or T values	Law	Equation
	Work:		Answer
3	A sample of neon gas occupies a volume of 752 mL at 25°C. What volume will the gas occupy at standard temperature if the pressure remains constant?		
	P, V or T values	Law	Equation
	Work:		Answer
4	A sample of oxygen gas has a volume of 150 mL when its pressure is 440 mmHg. If the pressure is increased to standard pressure and the temperature remains constant, what will the new gas volume be?		
	P, V or T values	Law	Equation
	Work:		Answer

5	Ralph had a helium balloon with a volume of 4.88 liters at 150 kPa of pressure. If the volume is changed to 3.15 liters, what would be the new pressure in atm?		
	P, V or T values	Law	Equation
	Work:		Answer
6	5.36 liters of nitrogen gas are at -25°C and 733 mm Hg. What would be the volume at 128°C and 1.5atm?		
	P, V or T values	Law	Equation
	Work:		Answer
7	A sample of oxygen gas occupies a volume of 85 mL at 35°C. What volume will the gas occupy at standard temperature if the pressure remains constant?		
	P, V or T values	Law	Equation
	Work:		Answer
8	At constant temperature, 2 L of a gas at 4 atm of pressure is expanded to 6 L. What is the new pressure?		
	P, V or T values	Law	Equation
	Work:		Answer