

Gas Laws 3 - The Breakdown

Name: _____

1) The gas left in a used aerosol can is at a pressure of 1 atm at 27°C. If this can is thrown into a fire, what is the internal pressure of the gas when its temperature reaches 927°C?

GIVEN	GAS LAW	WORK
	FORMULA	
ANSWER:		

2) A sample of carbon dioxide occupies a volume of 3.50 L at 1.25 atm. What pressure would the gas exert if the volume were decreased to 2.00 L?

GIVEN	GAS LAW	WORK
	FORMULA	
ANSWER:		

3) A sample of propane occupies 250.0 L at 1.50 atm and 38°C. Find its volume at 14.7 psi and 95°C.

GIVEN	GAS LAW	WORK
	FORMULA	
ANSWER:		

4) Oxygen gas is at a temperature of 40°C when it occupies a volume of 2.3 L. To what temperature in **Celsius** should it be raised to occupy a volume of 6.5 L?

GIVEN	GAS LAW	WORK
	FORMULA	
ANSWER:		

5) Fluorine exerts a pressure of 120 kPa. When the pressure is changed to 1.5 atm, its volume is 250. mL. What was the original volume?

6) A small volume of gas is heated from 23 °C to 230 °C. The final volume was 15 mL. What was the initial volume of the gas?

7) The volume of a gas is 200.0 mL at 275 K and 0.9 atm. Find its volume at STP.

8) A sample of N₂ has a pressure of 2.50 atm at 298 K. What pressure will it have at 95°C?

9) At what temperature does Ar gas need to be if 45 L of gas at 25 °C is needed to increase volume to 85 L?

10) A 300 mL sample of NO gas is at 1.1 atm and 20 °C. To what temperature would the gas need to be heated to get the volume to be 0.45 L at 1500 mmHg?

Answers: 1) 4 atm 3) 444 L 5) 317 mL 7) 179 mL 9) 562 K