

Technical Chemistry - Gas Laws Magic Square

You must show your work in the square.

Name.....

A. A sample of neon gas occupies a volume of 2.8 L at 1.8 atm. What would its volume be at 1.2 atm?	B. A balloon full of air has a volume of 2.75 L at a temperature of 18°C. What is the balloon's volume at 45 °C?	C. If 3.0 L of a gas at 20.0 °C is heated to 30.0 °C what is the new volume of the gas?
D. A sample of argon has a volume of 0.43 mL at 24 °C. At what temperature in degrees Celsius will it have a volume of 0.57 mL?	E. To what pressure would you have to compress 48.0 L of oxygen gas at 99.3 kPa in order to reduce its volume to 16.0 L?	F. If a barometer at your home reads 768.2 mm of Hg, what is the atmospheric pressure in kPa?
G. What is the starting volume of a 24.7L gas sample that exerts a pressure of 0.999 atm. It's original pressure being 1.011 atm.	H. What is the starting temperature of 150mL of gas when cooled to 33°C and a volume of 120mL	I. What is the volume occupied by 20.4 liters of CO ₂ at 1200 Torr when it is at STP?

1. 394 K

5. 24.4 L

9. 4.2 L

2. 3.01 L

6. 298 kPa

10. 382.5 K

3. 32.2 L

7. 3.1 L

11. 847 mm Hg

4. 121 °C

8. 102.4 kPa

12. 24 °C

Home