

Ideal Gas Law Problems

Use the ideal gas law to solve the following problems:

- 1) If I have 5 moles of a gas at a pressure of 75.0 atm and a volume of 0.100 liters, what is the temperature?

- 2) If I have an unknown quantity of gas at a pressure of 0.75 atm, a volume of 0.10 liters, and a temperature of 27°C , how many moles of gas do I have?

- 3) If I contain 4 moles of gas in a container with a volume of 0.100 liters and at a temperature of 500 K, what is the pressure inside the container?

- 4) If I have 0.7 moles of gas at a pressure of 0.09 atm and a temperature of 30 $^{\circ}\text{C}$, what is the volume of this container that the gas is in?

- 5) If I have 0.7 moles of gas at a temperature of 27°C , and a volume of 0.100 liters, what is the pressure of the gas?

- 6) If I have an unknown quantity of gas at a pressure of 0.5 atm, a volume of 0.10 liters, and a temperature of 500 K, how many moles of gas do I have?