# Ideal Gas Law Problems

*Use the ideal gas law to solve the following problems:*

1) If I have 4 moles of a gas at a pressure of 5.6 atm and a volume of 12 liters, what is the temperature?

2) If I have an unknown quantity of gas at a pressure of 1.2 atm, a volume of 31 liters, and a temperature of 87 $^{0}$C, how many moles of gas do I have?

3) If I contain 3 moles of gas in a container with a volume of 60 liters and at a temperature of 400 K, what is the pressure inside the container?

4) If I have 7.7 moles of gas at a pressure of 0.09 atm and at a temperature of 56 $^{0}$C, what is the volume of the container that the gas is in?

5) If I have 17 moles of gas at a temperature of 67 $^{0}$C, and a volume of 88.89 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 25 liters, and a temperature of 300 K, how many moles of gas do I have?

7) If I have 21 moles of gas held at a pressure of 78 atm and a temperature of 900 K, what is the volume of the gas?

8) If I have 1.9 moles of gas held at a pressure of 5 atm and in a container with a volume of 50 liters, what is the temperature of the gas?

9) If I have 2.4 moles of gas held at a temperature of 97 $^{0}$C and in a container with a volume of 45 liters, what is the pressure of the gas?

10) If I have an unknown quantity of gas held at a temperature of 1195 K in a container with a volume of 25 liters and a pressure of 560 atm, how many moles of gas do I have?

11) If I have 0.275 moles of gas at a temperature of 75 K and a pressure of 1.75 atmospheres, what is the volume of the gas?

12) If I have 72 liters of gas held at a pressure of 3.4 atm and a temperature of 225 K, how many moles of gas do I have?