**Chapter 12 Homework Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

What law is this?

3.0 L of H2 at -20°C are allowed to warm to room temperature of 27°C. What is the **volume**?

What law is this?

A gas occupies a volume of 3.86 L at 0.750 atm. What **pressure** will the gas have if the volume is 4.86L?

What law is this?

What **volume** will 2.50 L occupy if the pressure is changed from 760. mmHg to 630. mmHg?

What law is this?

Given 20.0 L of gas at 5°C and 730. torr, calculate the **volume** at 50.°C and 800. torr.

What law is this?

The pressure of a container of He is 650. torr at 25°C. If the sealed container is cooled to 0.°C, what is the **pressure**?

What law is this?

To what **temperature** must 10.0 L of N2 at 25°C and 700. torr be heated in order to have a volume of 15.0 L and pressure of 760. torr?

What law is this?

What **pressure** will be exerted by 0.400 mol gas in a 5.00 L container at 17°C?

What law is this?

A mixture of oxygen and nitrogen contains oxygen at a pressure of 144 torr and nitrogen at a pressure of 576 torr. What is the **total pressure** of the mixture?

How many moles are in 3.95 L of fluorine at STP? (keep it simple!)

What law is this?

A 23.8 L cylinder contains oxygen at 20.0°C and 732 torr. How many **moles** are in the cylinder?

What law is this?

How many **L of O2**are in a tank containing 251 mol at 22.0°C and 125 atm?

What law is this?

How many **L of O2** at STP are needed to react with 1.50 mol H2?

2 H2 + O2 → 2 H2O

What law is this?

What **volume of hydrogen**, collected at 30.°C and 700. torr will be formed by reacting 50.0 g Al with plenty of HCl(aq)?

2 Al + 6 HCl(aq) → 2 AlCl3 + 3 H2

What law is this?

2 Al + 3 H2SO4(aq) → Al2(SO4)3 + 3 H2

How many **g of Al** must react with sulfuric acid to produce 1.25 L of H2 at STP?

How many **grams Al2(SO4)3** are produced when 25.0 L of H2 is produced at 25°C and 2.25 atm?