

# 8.1 Gas Laws Notes

## Pressure-Volume

<b>Pattern</b>
If _____ goes _____
then _____ goes _____

Scenario

Bike tire pump.

<b>Equation</b>
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Examples

A given samples of gas occupies 523 mL at 1.00 atm. The pressure is increased to 1.97 atm, while the temperature remains the same. What is the new volume of gas?

More practice on pg 425, #1-4

## Temperature-Volume

<b>Pattern</b>
If _____ goes _____
then _____ goes _____

Scenario

Car tires in summer vs winter.

<b>Equation</b>
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Examples

A balloon is inflated to 665 mL volume at  $27^{\circ}C$ . It is immersed in a dry-ice bath at  $-78.5^{\circ}C$ . What is its volume, assuming the pressure remains constant?



More practice on pg 428, #1-4

# Temperature-Pressure

Pattern

If \_\_\_\_\_ goes \_\_\_\_\_

then \_\_\_\_\_ goes \_\_\_\_\_

Scenario

Tea kettle heats up.

Equation

## Examples

An aerosol can containing gas at 101 kPa and  $22^{\circ}C$  is heated to  $55^{\circ}C$ . Calculate the pressure in the heated can.

More practice on pg 431, #1-4

# Volume-Moles

Pattern

If \_\_\_\_\_ goes \_\_\_\_\_

then \_\_\_\_\_ goes \_\_\_\_\_

Scenario

Blow a balloon up.

Equation

## How can I remember all this stuff?!?

- 1) Understand what's happening to the particles. Draw pictures.
- 2) Direct vs Inversely proportional.
- 3) Remember use K not C! (Why?)

Still more practice: pg 432, #1-20 (Section Review)