

Reading questions (446 – 454)

According to the data that Boyle collected (Figure 13.4)

- What is the volume of gas collected at 100 in.Hg? \_\_\_\_\_
- What is the volume of gas collected at 50 in.Hg? \_\_\_\_\_
- As the pressure on the gas increases what happens to its volume? \_\_\_\_\_
- In math class what would you call this kind of a curve? \_\_\_\_\_

What is the mathematical formula for Boyles law?

When did Charles live?

What is *absolute zero*?

What is the formula for Charles law?

What is the formula for the Combined gas law? (Mr C talked about this in class)

When working with the gas laws, what temp scale do you need to use?

**Now some math (yeah...it's about time)**

You buy a bag of vinegar chips with a volume of .50 L here in Santee on a day when it is 18.5 celsius, and the pressure is 1.014 atm. You then drive to the mountains where the temp is the same, but the pressure is now .640 atm. Calculate the new volume of the bag.

An can of hairspray has a volume of 250 ml, at a temp of 33 celsius and a pressure of 10.2 atm. You then let out a bunch of the spray, the volume of the can stays the same, but the new pressure of the gas in the can is now 1.1 atm. Calculate the temp of the can in Celsius?

In a diesel engine 10. ml of gas is placed into a cylinder at 50 celsius and 1.0 atm of pressure. The vol of the cylinder decreases to 1.00ml as the crankshaft turns. Calculate the temp of the gas, if pressure stays constant?

The air in a person's lungs occupies 3.5 L at sea level (1.0 atm) and a temp of 23 celsius. What volume would the air occupy at a depth of 100m deep in the ocean where the the pressure is 10.2 atm and the temp is 2.0 celsius?

