

## Ch5/PowerPoint Study-2 Gas Laws

Name:

*Answer these questions as you are watching the videos. They are due in class.*

*These questions are not just for you to answer but also to prepare you for the exam.*

*Make sure you understand what you are writing and not just copy from the text book. **Show all work.***

1. If 25.5 L of oxygen are cooled from 150°C to 50°C at constant pressure, what is the new volume of oxygen? (Ans: 19.5 L)
  
2. A flexible vessel contains 47 L of gas where the pressure is 1.3 atm. What will the volume be when the pressure is 0.85 atm, the temperature remaining constant? (Ans: 72 L)
  
3. A gas occupying a volume of 1.50 L exerts a pressure of 700 mmHg at 200°C. What is the correct pressure at 6.00 L and 200°C? (175 mmHg)
  
4. A rigid container is charged with a gas to a pressure of 760 mmHg at 20.0°C and tightly sealed. What is the new pressure when the temperature of the gas is *increased* by 40.0°C? (Ans: 864 mmHg)
  
5. A mixture of gases contains nitrogen at a partial pressure of 0.50 atmospheres, oxygen at a partial pressure of 0.20 atmospheres and carbon dioxide. The total gas pressure is 0.80 atmospheres.
  - a) Find the partial pressure of carbon dioxide. (Ans: 0.10 atm)
  - b) If there are 0.25 moles of nitrogen, what is the number of moles of oxygen? (Ans: 0.10 mol)