Name: _____
Hour: ____ Date: _____

Chemistry: *Behavior of Gases*

Solve the following problems. Show your work and include correct units for full credit.

1. A gas has an initial volume of 15 L. If the temperature increases from 330 K to 450 K, find the new volume.

2. A gas exerts 1.2 atm of pressure. If the temperature is raised from 25^{o}C to 100^{o}C, find the new pressure.

3. A sample of oxygen takes up 34 dm^{3} of space when it is under 500 kPa of pressure. When the pressure is changed to 340 kPa, find the new volume.

4. The pressure of some N_2 drops from 315 kPa to 220 kPa. If the initial volume is 1.4 L, find the new volume.

5. The pressure of neon changes from 786 mm Hg to 1811 mm Hg. If the initial temperature 87^{o}C, what is the new temperature (in ^{o}C)?

6. When the temperature of a gas changes, its volume decreases from 12 cm^{3} to 7 cm^{3}. If the **final** temperature is measured to be 18^{o}C, what was the initial temperature (in ^{o}C)?

Answers: 1. 22.5 L 2. 1.5 atm 3. 50 dm^{3} 4. 2.0 L 5. 556^{o}C 6. 226^{o}C