CHEMISTRY MATTERS
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1. Boyle's Law: When _____ is held constant, the pressure and volume of a gas

   are _____ proportional.

2. Mathematically, Boyle's Law is stated PV = _____ or P_1V_1 = _____ .

Work each of the following problems. SHOW ALL WORK.

3. At a pressure of 405 kPa, the volume of a gas is 6.00 cm^3. Assuming the temperature remains constant, at what pressure will the new volume be 4.00 cm^3?

4. A volume of gas at 1.10 atm was measured at 326 cm^3. What will be the volume if the pressure is adjusted to 1.90 atm?

5. If 36.5 m^3 of a gas are collected at a pressure of 755 mm Hg, what volume will the gas occupy if the pressure is changed to 632 mm Hg?

6. Charles's Law: When _____ is held constant, the volume and temperature of a gas

   are _____ proportional.

7. Mathematically, Charles's Law is stated: $\frac{V}{T}$ = _____ or $\frac{V_1}{T_1} = \frac{}{T_2}$

8. The _____ temperature scale must be used in all gas law problems.

Work each of the following problems. SHOW ALL WORK.

9. At 189 K, a sample of gas has a volume of 32.0 cm³. What volume does the gas occupy at 242 K?

10. The gas in a balloon occupies 2.25 L at 298 K. At what temperature will the balloon expand to 3.50 L?

11. A sample of gas has a volume of 852 mL at 25 °C. What Celsius temperature is necessary for the gas to have a volume of 945 mL?