Honors Chemistry – Gas Laws Worksheet Key

1. Determine the pressure in torr and kPa on a day when the pressure is .96atm.

torr = (.96atm)(760torr/atm) = 729.6 = **730torr**
kPa = (.96atm)(101.3kPa/atm) = **97kPa**

2. A reaction occurs in which a gas is produced causing the mercury column in an open-end manometer to be 125mm higher on the side of the sample gas. If the prevailing atmospheric pressure is .97atm, what is the pressure of the gas

P_{gas} = (.97atm)(760mmHg/atm) – 125mmHg = 612.2torr

4. A gas with a volume of 1.00 L is at 135°C and 844 mm Hg. What is the volume if the conditions change to 14° C and 748 mm Hg? **(0.794L)**

5. Calculate the mass of 162 L of chlorine gas, measured at STP. **(513 g)**

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