Pressure Worksheet/Accel Chem   Name: _____Period: _____

<u>**Answer the following questions about gases:**</u>

1. What is the Kinetic Molecular Theory?

2. List the assumptions that we make about all gases in the Kinetic Molecular Theory.

3. Describe the behavior of gases (use the following terms: density, compression, expansion, diffusion, effusion).

4. What instrument is used to measure atmospheric pressure? _____

5. What does STP stand for? What values are used for STP?

<u>**Directions:**</u> Complete the following calculations showing the *formula, set up, and answer* with units.

A. <u>**Pressure Conversion:**</u>

1. Fill in the following information needed for pressure conversions:

    a. ___atm = _____ kPa   b. ___ atm = _____mmHg

2. A radio station announcer reports the atmospheric pressure to be 99.6 kPa. What is the pressure in atmospheres?

3. What is the atmospheric pressure in atmospheres if the barometer reads 723 mmHg?

4. Convert 100.0 kPa to mmHg.

B. <u>**Temperature Conversion:**</u>

1. Convert the following temperatures from Kelvin to ˚C:

    a. 150 K = _____˚C   b. 356 K = _____˚C

2. Convert the following temperatures from ˚C to Kelvin:

    a. -50.5 ˚C = _____ K   b. 427 ˚C = _____ K

C. <u>**Dalton's Law:**</u>

5. Define Dalton's Law of Partial Pressures.

6. Write the formula for Dalton's Law of Partial Pressures:

7. Determine the total pressure of a gas mixture that contains CO, Ne and He if the partial pressures of the gases are CO = 1.53 atm, Ne = 0.82 atm, and He = 0.34 atm.

8. Blast furnaces give off many unpleasant and unhealthy gases. If the total air pressure is 0.99 atm, the partial pressure of carbon dioxide is 0.05 atm, and the partial pressure of hydrogen sulfide is 0.02 atm, what is the partial pressure of the remaining air?