Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Gay Lussac’s Law Practice**

**P1 = P2**

**T1 T2 (temperature in Kelvin)**

Directions: Work each problem on this worksheet. Put your final answer in the blank beside the number. You must show work to receive full credit.

\_\_\_\_\_\_\_\_\_\_\_\_1. A gas sample is at 6.58 kPa and 539 K. What will the new pressure be if the temperature changes to 211 K?

\_\_\_\_\_\_\_\_\_\_\_\_2. The gas sample in an aerosol can is at a pressure of 103 kPa at 25.0°C. If this can is thrown onto a fire, what is the pressure of the gas when its temperature reaches 928°C?

\_\_\_\_\_\_\_\_\_\_\_\_3. The pressure in an automobile tire is 198 kPa at 27°C. At the end of a trip on a hot sunny day, the pressure has risen to 225 kPa. What is the temperature of the air in the tire? (Assume that the volume has not changed.)

\_\_\_\_\_\_\_\_\_\_\_\_4. A sealed container of gas contains nitrogen gas at 1000 kPa pressure and a temperature of 20.0°C. The cylinder is left in the sun, and the temperature of the gas increases to 50°C. What is the new pressure in the cylinder?

\_\_\_\_\_\_\_\_\_\_\_\_\_5. The gas in a closed container has a pressure of 300 kPa at 30°C. What will the pressure be if the temperature is lowered to 172°C?