Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Assignment: Boyle’s and Charles’s Law

1. The volume of a weather balloon is 30.0L after the pressure has been changed from 785mmHg to 742mmHg. What was the original volume of the balloon?
2. A 600mL sample of HCl(g) has a pressure of 150kPa. If it is transferred to a vessel with a volume of 0.350L, what is the new pressure?
3. A 1.5L container is filled with argon gas at a pressure of 1.5atm. What is the final volume if the pressure is dropped to 646mmHg?
4. A sample of gas occupies 6.7 L at 100°C. What will the final temperature be in Kelvins when the volume is decreased to 5.6 L?
5. A container holds 50.0 mL of nitrogen at 25°C and a pressure of 736 mmHg. What will be its volume if the temperature increases by 35°C?
6. The volume of an inflate balloon is 3.50L. What will be the new volume of the balloon if the temperature decreases by a factor of 4?