Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_ Ast: \_\_\_\_\_

**PROPERTIES OF GASSES WS**

1. Match each gas law with its explanation below:
   * 1. IDEAL GAS LAW
     2. BOYLE’S LAW
     3. CHARLES’S LAW
     4. GAY-LUSSAC’S LAW
     5. AVOGADRO’S LAW
2. \_\_\_\_\_ PRESSURE is inversely proportional to VOLUME (P α 1/V)
3. \_\_\_\_\_ PRESSURE is directly proportional to TEMPERATURE (P α T)
4. \_\_\_\_\_ VOLUME is directly proportional to TEMPERATURE (V α T)
5. \_\_\_\_\_ A combination of the other gas laws to relate the PRESSURE, VOLUME, & Temperature
6. \_\_\_\_\_ VOLUME is directly proportional to the AMOUNT of gas
7. Use Boyle’s Law to predict what would happen if you increase the pressure on an ideal gas (keeping the temperature constant).
8. Use Charles’s Law to predict what would happen if you increase the temperature of an ideal gas (keeping the pressure constant).
9. Use Gay-Lussac’s Law to predict what would happen if you decrease the temperature of an ideal gas (keeping the volume constant).
10. Explain the results of the gas pressure lab (when you balanced the books on the syringe) using either the ideal gas law or its component laws.
11. Explain the results of the gas temperature lab (when you placed the syringes in different temperatures of water) using either the ideal gas law or its component laws.
12. Explain why you can use a flame syringe to ignite a cotton ball using either the ideal gas law or its component laws.
13. Explain how Boyle’s Law and Charles’s Law relate to the concept of density.
14. Explain how the ideal gas law incorporates the four gas laws (Boyle’s, Charles’s, Gay-Lussac’s, and Avogadro’s Laws) into one gas law.
15. Draw a series of rough graphs below illustrating the relationships between the pressure, volume, and temperature of an ideal gas.