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Transparency Worksheet

Name _____

Boyle's Law

Class _____ Date _____

1. What observations can you make about the contents of the two flasks in the diagram? _____

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2. State *Boyle's Law*. _____

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3. (a) According to the graph, what would be the volume when the pressure is 275 kPa? _____

(b) When the pressure is 50 kPa? _____

4. What relationship does this graph indicate? _____

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5. Write the equation for Boyle's Law. _____

6. If a sample of gas has a volume of 150 cm^3 when the pressure is 175 kPa, what is its volume when the pressure is increased to 200 kPa? The temperature and amount of the gas remain constant. _____

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7. What pressure is required to reduce the volume of a sample of air from 2.00 L to 0.500 L? The original pressure on the sample is 103 kPa; the amount and temperature of the sample remain constant. _____

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Critical Thinking

8. (a) If you have two equal size containers of nitrogen gas each holding the same amount of gas and you were to transfer the gas from both containers into one of the containers, how would the pressure of the gas be affected? Assume that the temperature does not change. _____

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(b) How does this problem illustrate Boyle's Law? Use the back of this worksheet to make a drawing of the two containers before and after the transfer of the gas.