

**SECTION 15-3**

**REVIEW AND REINFORCE**

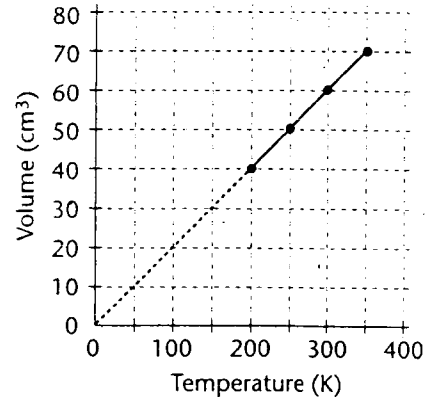
**Graphing Gas Behavior**

**◆ Understanding Main Ideas**

**Table A**

Relationship of Temperature and Volume of an Amount of Gas at Constant Pressure	
Temperature (K)	Volume (cm <sup>3</sup> )
200	40
250	50
300	60
350	70

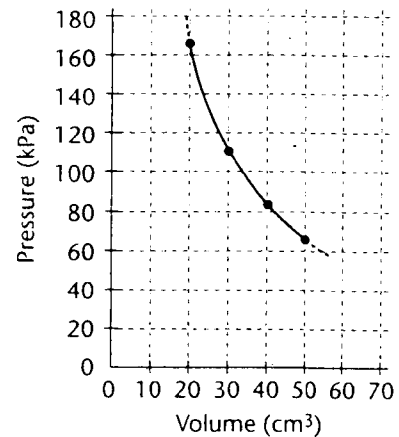
**Graph A**



**Table B**

Relationship of Volume and Pressure of an Amount of Gas at Constant Temperature	
Volume (cm <sup>3</sup> )	Pressure (kPa)
20	166.5
30	111.0
40	83.3
50	66.6

**Graph B**



Use the graphs and tables above to answer the following questions. Write your answers on a separate sheet of paper or in the spaces provided.

- Which law is represented in each graph above? A = Charles B = Boyle's
- Are the variables in the graphs directly proportional or do they vary inversely?  
How can you tell? A = directly proportional - straight line passing through (0,0); B = inversely - curve slopes downward
- Use the graphs to predict the following:
  - volume of the gas when the temperature is 400 K about 80 cm<sup>3</sup>
  - pressure of the gas when the volume is 60 cm<sup>3</sup> about 55 kPa

**◆ Building Vocabulary**

Answer the following questions on a separate sheet of paper.

- What is a graph? A diagram on a grid showing the relationship of 2 variables
- Sketch a graph of two variables that vary inversely. - Graph B
- Sketch a graph of two variables that are directly proportional. Graph A