

## Chapter 5 Focus Questions

- I. Section 5.1
  1. Why does a can collapse when it cools?
  2. What is a barometer?
  3. What creates atmospheric pressure? How does it vary?
  4. What are the units of pressure?
  5. Convert 10 atm to mmHg and then torr
- II. Section 5.2
  1. What is Boyle's Law? Is it a direct or indirect relationship? What does the graph look like?
  2. What is a gas that strictly obeys the law called?
  3. Read Sample Exercise 5.2 and do #31
  4. What is Charles' Law? Is it a direct or indirect relationship? What does the graph look like?
  5. What is absolute zero?
  6. Read Sample Exercise 5.4 and do #32
  7. What is Avogadro's Law
  8. Read Sample Exercise 5.5 and do #33
- III. Section 5.3
  1. What is the ideal gas law?
  2. Read Sample Exercise 5.6 and do #35, 37, 39
  3. Read Sample Exercise 5.7 and do #41
  4. Read Sample Exercise 5.8 and do #43
  5. Read Sample Exercise 5.9 and do #45
  6. Read Sample Exercise 5.10 and do #47
- IV. Section 5.4
  1. What is molar volume?
  2. What is STP?
  3. Read Sample Exercise 5.12 and do #51
  4. Read Sample Exercise 5.13 and do #55
  5. Read Sample Exercise 5.14 and do #59
- V. Section 5.5
  1. What is partial pressure? What is Dalton's Law of Partial Pressure?
  2. What is important in a mixture of ideal gases?
  3. How can  $P_{\text{total}}$  be represented as?
  4. Read Sample Exercise 5.15 and do #63
  5. What is a mole fraction?
  6. Read Sample Exercise 5.16 and do #67
  7. Read Sample Exercise 5.18 and do #71
- VI. Section 5.6
  1. State and explain the Kinetic Molecular Theory in your own words?
  2. What is the relationship between pressure and volume and what is this relationship called?
  3. What is the relationship between pressure and temperature and what is this relationship called?

4. What is the relationship between temperature and volume and what is this relationship called?
5. What is the relationship between the number of moles and volume and what is this relationship called?
6. What is Dalton's Law?
7. What is the ideal gas law?
8. What is the meaning of the Kelvin temperature of a gas?
9. What is Root Mean Square Velocity?
10. Read Sample Exercise 5.19 and do #75.
11. What is the effect of temperature?

VII. Section 5.7

1. Define diffusion.
2. Define effusion
3. What is Graham's law of effusion? What do the variables stand for?
4. What is the result of experimentally testing diffusion compared to the formula?

VIII. Section 5.8

1. What is an ideal gas?
2. What is a real gas?
3. When do gases behave most ideal?
4. For ideal gases  $PV/nRT$  is closest in value to?
5. What are the modifications for and what do they take into account?
6. What is the Van Der Waal's equation?
7. Why do the corrections make physical sense?

IX. Section 5.9

1. What is the atmosphere?
2. What are the most common gases?
3. What are the different layers?
4. What kind of chemistry is occurring at these layers?
5. What happens with regard to air pollution
6. What are the main sources of combustion?
7. It's not easy being green is sung by what Muppet?