Ap Chemistry

Summer textbook link pdf

Please complete all 3 chapters of reading questions and problems. You can use the linked pdf version of the textbook to complete the assignments until you order and receive your physical textbook for the school year.
These items are also available via Canvas.

AP Chemistry
Chapter 1 Reading Questions

Section 1

1. What is one surprising Chem fact from the introduction?

2. What can be used to view individual atoms?

3. Compare macroscopic vs microscopic.

4. Review question: List the 7 diatomic molecules.

5. What two fundamental concepts of Chemistry are illustrated in section 1.1?

Section 2

1. Compare qualitative and quantitative observations.

2. What is another word for scientific theory?

3. Compare scientific theory and law.

Section 3

1. A quantitative measure always includes what 2 things?

2. 1 cm3 = ? mL

3. Compare mass and weight.

Section 4

1. How many numbers in a measurement are uncertain?

2. What is the rule for recording measurements to correct significant figures?

3. Compare accuracy and precision.

4. Compare random and systemic error.

Section 5

1. Make a set of rules for counting and using sig figs in calculations.

Section 6 X
Section 7

1. A Japanese car company advertises that its cars have a gas mileage of 15 Km/L. Convert this to miles/gallon.

Section 8

What are the formulas for temperature conversions?

Section 9
What is formula for Density and explain how it can be used to help identify an unknown substance.

Section 10

1. List and define the three states of matter.

2. List and explain the 3 physical separation methods your book discusses.

Chapter problems:
29, 31, 34, 38(a-e), 39, 50, 57, 66, 68, 71, 82, 83, 87

Chapter 2 Reading questions

Section 2.2

1. List and describe the 3 fundamental chemical laws.

Section 2.3

1. List the 4 proponents of Dalton's theory.

2. What is Avogadro's hypothesis?

Section 2.4

Describe the contributions made by the following people to atomic theory:

JJ Thomson

Becquerel

Rutherford

2.5

1. Define isotope

2. What is "Z" and what does it mean. What is "A" and what does it mean.

3. What is a covalent bond? And, the resulting collection of atoms is called?

4. What are the 4 ways of representing molecules?

5. How do ions form?

6. What is ionic bonding?

7. Define ionic solid.

8. Define polyatomic ion.

Section 2.7

1. List the properties of metals:

2.List the properties of nonmetals:

3. What are the 4 families with names

Section 2.8

1. What are the rules for naming type 1 binary ionic compounds:

2. Rules for naming type II Binary ionic compounds

3. Rules for naming oxyanions

4. Rules for naming binary covalent molecules

5. Rules for naming acids

Chapter 2 problems:

49, 51, 53, 56, 62, 64, 68, 70, 72, 73, 74, 75, 76, 80, 84, 86, 88

Chapter 3 Reading Questions

1. Why do we count atoms by weighing?

2. Describe how a mass spectrometer works.

3. Define amu.

4. Define Avogadro's #

5. Define molar mass.

6. Compare empirical and molecular formulas.

7. Define stoichiometric quantities.

8. Define Limiting reactant.

9. Define Theoretical Yield

Chapter Problems: 38, 46, 48, 50, 51, 53, 55, 57, 59, 61, 68, 70, 76, 79, 82, 83, 85, 87, 96, 97, 102, 105, 108, 117, 124, 125