

I. The Parts of the Atom

A. The **atom** is

B. It is the

C. The Nucleus

1.

a. Has a

b. Actual mass is 1.67×10^{-27} kg.

c. Has a

d. Located

e. _____ of the element!

2.

a. Has a

b. Actual mass is 1.67×10^{-27} kg.

c. Has a

d. Located

e. Helps to

3. _____ What is left...

a. Has a

b. Actual mass is 9.11×10^{-31} kg.

c. Has a

d. Located

e. Very, very

f. Symbol:

g.

4. Thus, the nucleus is

a. So what takes up most of an element's volume?

II. Reading the Periodic Table (X = symbol of element (find with # of protons))

X

III. Writing the Chemical Symbol (X = symbol of element (find with # of protons))

X

IV. Calculating # of p^+ , n^0 and e^-

A. **Protons:** same as the element's

B. **Neutrons:**

C. **Electrons:**

V. Isotopes

A. **Isotopes** are

B. They have the _____ but

1. They have the _____ but

2. NOTE: Sometimes, the symbol is written without the atomic number.

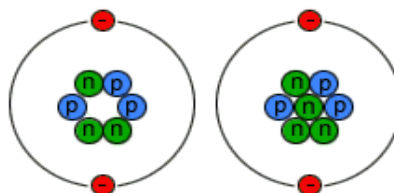
C. Atom names are written as “name of element-mass number”. Example: Hydrogen-3.

D. Isotopes can be

E. Mass number on the periodic table =

What are the names of these atoms?
Symbols?

Isotopes



VI. Average Atomic Mass

A. Thus, atomic masses

B. Why are the atomic masses on the periodic table not whole numbers?

C. Because the P.T. shows _____ of an element.

D. Look at p. 103

E. To Calculate Average Atomic Mass:

1. Calculate the abundance of each isotope by dividing the amount of the isotope by the total amount of the element.

2. Calculate the mass contribution from each isotope using the equation:

$$\text{Mass contribution} = (\text{mass})(\text{abundance})$$

3. Add! The sum of the mass contribution of each isotope is the average atomic mass.