

Unit 1: Atomic Theory

What is an atom?

atom: the smallest unit of an element that contains the chemical properties of that element

What is an ion?

ion: an atom that has gained or lost one or more electrons and has a negative or positive charge

What is the difference between an atom and an ion?

Subatomic Particles

Particle	Symbol	Location	Relative Charge	Relative Mass	Actual Mass

**To be completed in class!
Draw the table, but leave the
insides blank for now.**

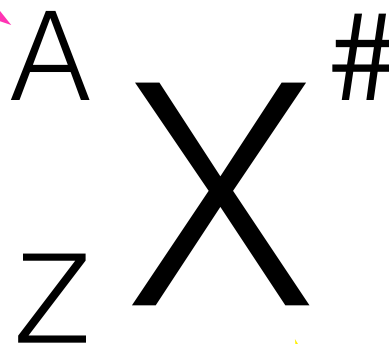
Chemical Symbols

(# of protons - # of electrons)

(# of protons + # of neutrons)

Mass Number*

Charge



Atomic Number

Chemical Symbol

(# of protons)

(from periodic table)

***NOTE: Mass Number is NOT the same as Atomic Mass (on the periodic table)**

The mass number will always be a whole number

(we will learn about atomic mass later)

Example 1

Mass Number



Atomic Number

Answers to be completed in class!

protons = _____
(atomic #)

neutrons = _____
(mass # - atomic #)

electrons = _____
(atomic # - charge)

Example 2



protons =

neutrons =

electrons =

**To be completed
in class!**

Example 3

?

protons = 17

neutrons = 18

electrons = 18

**To be completed
in class!**

Example 4

?

protons = 29

neutrons = 34

electrons = 29

**To be completed
in class!**