

Name: _____ Date: _____ Period: _____

Isotopes and Ions

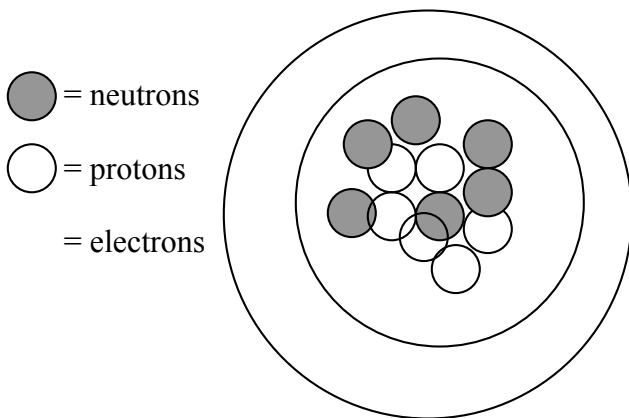
An **isotope** is an element with **extra** _____, or **neutral** particles.

An **ion** is an element that has _____ or _____ an _____, or a **negative** charged particle.

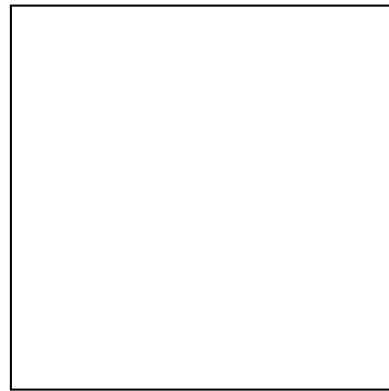
An ion that has **lost** an electron is called a _____ (“happy cat” or “gato feliz”).

An ion that has **gained** an electron is called an _____.

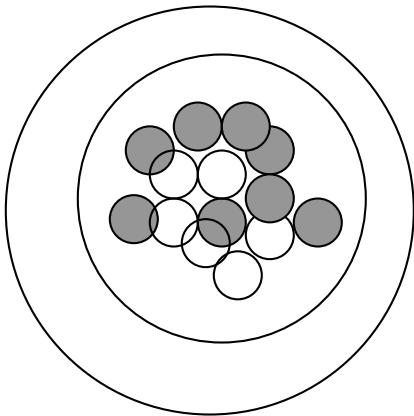
Draw in the electrons in the orbitals:



Draw in the element symbol:



Label atomic mass, atomic number



Draw in the electrons.

Atomic Number of this element is _____.

Atomic Mass is _____.

This is an _____ of the element _____.

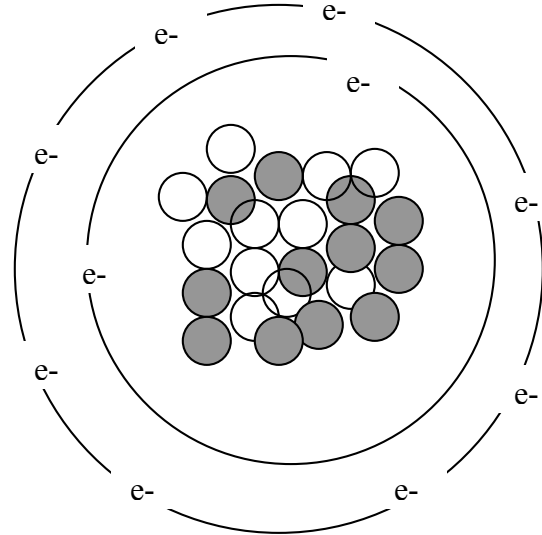
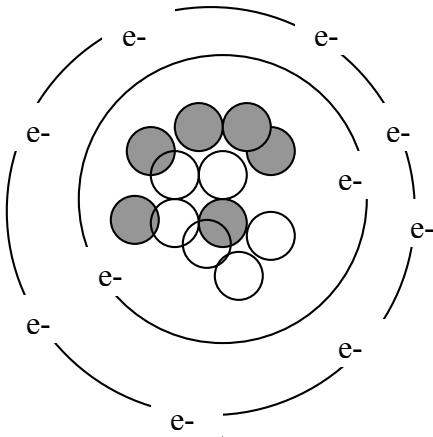
We write the symbol as _____.

IONS:

In the 1st orbital, there can be _____ electrons (e-).

In the 2nd orbital, there can be _____ electrons (e-).

In the 3rd orbital, there can be _____ electrons (e-).



This element has _____ protons.
 This element should have ___ electrons to be stable,
 but has gained ___ electrons to fill its outer shell.
 It now has ___ valence electrons.
 It is an _____, we write it's symbol as _____.

This element has _____ protons.
 This element should have ___ electrons to be stable,
 but has lost ___ electron to have a full outer shell.
 It now has ___ valence electrons.
 It is a _____, we write it's symbol as _____.

Now, use the provided piece of paper and draw the following isotopes and ions:

Isotopes: O₁₆ O₁₇ O₁₈

Ions: Ca²⁺ F¹⁻ N³⁻