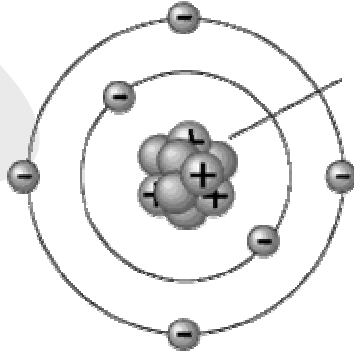


Atomic Information Assignment

Write your answers on this sheet, use the website given to help answer.

1. Label the protons, neutrons, and electrons in the diagram below:



2. Explain what an atom's **atomic number** is equal to. (Don't answer 47).
(<http://education.jlab.org/glossary/atomicnumber.html>)

3. What does the atomic number determine about the atom? (use same site)

4. What element is the diagram at the top of this worksheet? (use your periodic table)

5. What is an "atomic mass unit?" (http://simple.wikipedia.org/wiki/Atomic_mass_unit)

6. How do you find the **atomic mass** of an atom? (atomic mass is also known as the "mass number, or the "atomic weight")
(<http://misterguch.brinkster.net/subatomic%20particles.html>)

7. What is the atomic mass of the atom in the diagram under #1?

To find the number of neutrons in an atom:

$$\begin{array}{c} \text{(Atomic Mass)} - \text{(Atomic Number)} = \# \text{ of Neutrons} \\ \# \text{ of protons \& neutrons} \qquad \qquad \# \text{ of protons} \end{array}$$

8. How many neutrons do the following atoms have?
- a) Oxygen (Atomic Mass = 16, Atomic Number = 8)
 - b) Iridium (Atomic Mass = 192, Atomic Number = 77)
 - c) Zirconium (Atomic Mass = 91, Atomic Number = 40)

9. What is an **isotope**? (<http://education.jlab.org/glossary/isotope.html>)

In an atom, the number of electrons is equal to the number of protons.

10. Look at your periodic table. How many protons, electrons, and neutrons do each of the following elements have?

- a) Lithium (Li)
- b) Ytterbium (Yb)
- c) Uranium (U)
- d) Arsenic (As)

11. What is a cation (pronounced *cat-eye-ons*)? What is an anion? How are they different from normal atoms?

(<http://simple.wikipedia.org/wiki/Cations> & <http://simple.wikipedia.org/wiki/Anions>)

The general term for atoms with either positive or negative charges is “ion.”

12. A krypton (Kr) ion has 38 electrons. Is it a cation or anion? What is its charge? (use your periodic table)

13. Draw a diagram of a Neon cation with a charge of +2. Label the protons, neutrons, and electrons. Make sure you have the correct number of each.