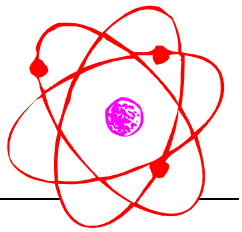

Elements and Their Isotopes Worksheet

Part of Atom	Charge	Atomic weight (u)
proton	+1	1.0073
neutron	0	1.0087
electron	-1	0.000549

Because electrons weigh so little we do not count them when figuring out the weight of an atom or an isotope. Only the proton and neutron are used.

1. The common form of helium gas (the gas often put in balloons) is called helium-4.

a. The number of protons in any atom is the same as its atomic number. What is the atomic number of helium? _____

b. How many protons does helium have? _____

c. Helium has two neutrons, plus the number of protons you determined. Find the total atomic weight of helium-4.

d. Why do you think helium-4 is called helium-4?

2. The common form of iodine (the liquid that is often put on cuts and wounds) is called iodine-126.

a. The number of protons in any atom is the same as its atomic number. What is the atomic number of iodine? _____ Therefore iodine has ____ protons.

c. Iodine has 73 neutrons, plus the number of protons you determined. Find the total atomic weight of iodine-126. Show your calculations.

d. Why do you think iodine-126 is called iodine-126?

3. The common form of uranium (a metal used in nuclear reactors) is called uranium-238.

a. The number of protons in any atom is the same as its atomic number. The atomic number of uranium is _____. Therefore uranium has _____ protons.

b. Uranium has 146 neutrons, plus the number of protons you determined. Find the total atomic weight of uranium-238. Show your calculations.