

# Atomic Structure Worksheet

Name: \_\_\_\_\_

Core: \_\_\_\_\_

1. Name the three particles of the atom and their respective charges are:

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

2. The atomic number tells you the number of \_\_\_\_\_ in one atom of an element. It also tells you the number of \_\_\_\_\_ in a neutral atom of that element. The atomic number gives the "identity" of an element as well as its location on the Periodic Table. No two different elements will have the \_\_\_\_\_ atomic number.

3. The \_\_\_\_\_ of an element is the average mass of an element's naturally occurring atoms.

4. The \_\_\_\_\_ of an element is the total number of protons and neutrons in the \_\_\_\_\_ of the atom.

5. The mass number is used to calculate the number of \_\_\_\_\_ in one atom of an element. In order to calculate the number of neutrons you must subtract the \_\_\_\_\_ from the \_\_\_\_\_.

6. Give the symbol and number of protons in one atom of:

Lithium \_\_\_\_\_

Bromine \_\_\_\_\_

Iron \_\_\_\_\_

Copper \_\_\_\_\_

Oxygen \_\_\_\_\_

Mercury \_\_\_\_\_

Arsenic \_\_\_\_\_

Helium \_\_\_\_\_

7. Give the symbol and number of electrons in a neutral atom of:

Uranium \_\_\_\_\_

Chlorine \_\_\_\_\_

Boron \_\_\_\_\_

Iodine \_\_\_\_\_

Antimony \_\_\_\_\_

Argon \_\_\_\_\_

8. Name the element which has the following numbers of particles. Be specific.  
(Include charges and mass numbers where possible.)

26 electrons, 29 neutrons, 26 protons \_\_\_\_\_

53 protons, 74 neutrons \_\_\_\_\_

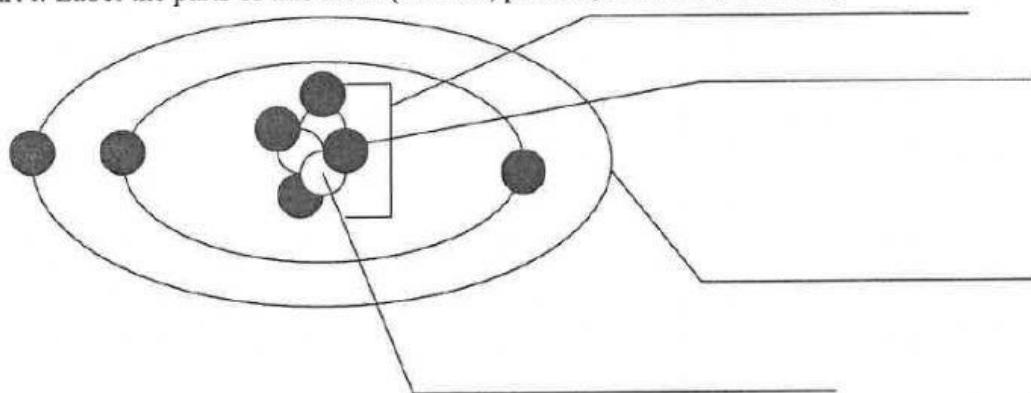
2 electrons (neutral atom) \_\_\_\_\_

20 protons \_\_\_\_\_

0 neutrons \_\_\_\_\_

### On the Inside

Part 1: Label the parts of this atom (nucleus, protons, electrons, neutrons)



Part 2: Answer these:

1. The subatomic particle with no electrical charge is the \_\_\_\_\_

The subatomic particle with a positive charge is the \_\_\_\_\_

The subatomic particle with a negative charge is the \_\_\_\_\_

There are the same number of these two particles in an atom

\_\_\_\_\_ and \_\_\_\_\_

The atomic number is the same as the number of \_\_\_\_\_

2. Where is most of the mass of an atom located?

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6. Which particles account for the mass of the atom? (Atomic mass or mass number) \_\_\_\_\_ and \_\_\_\_\_

7. Complete the following table

Symbol	Atomic Number	Number of Protons	Number of Neutrons	Number of Electrons	Mass
	9				
B					
S					
	19				
		13			