

### Atomic Structure Worksheet

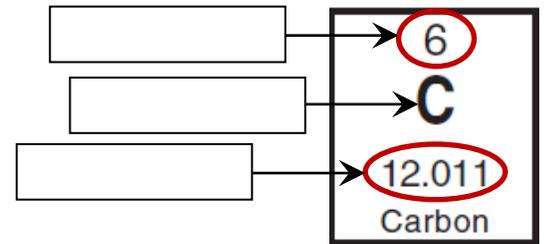
List the 3 subatomic particles, their charges, masses and where in the atom they are located in the chart below:

Subatomic Particle	Electrical Charge	Location in Atom	Relative mass (amu)

**Draw an atom below and label the following:**  
Electron, Proton, Neutron, Nucleus

Describe how to determine the number of each subatomic particle in an atom below

<b>Proton:</b>	
<b>Electron:</b>	
<b>Neutron:</b>	



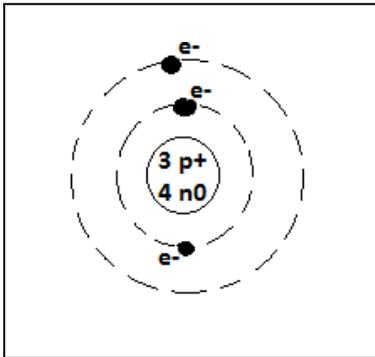
Fill in the chart for the elements below. *Round all atomic masses to the nearest whole number:*

Element	Symbol	Atomic Number	Atomic Mass	# of Protons	# of Electrons	# of Neutrons
sodium						
	Cu					
				17		
silver						
	Pb					
calcium						
		72				
radon						
			93			52
uranium						
potassium						
						0

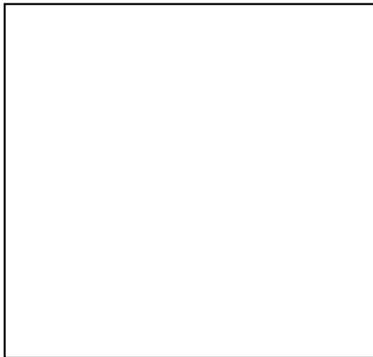
The \_\_\_\_\_ has a negative charge. The \_\_\_\_\_ is smaller than the other particles and can be found outside of the \_\_\_\_\_, which is another name for the center of the atom. In the center, there are \_\_\_\_\_ and \_\_\_\_\_. The \_\_\_\_\_ have no charge but weigh a lot compared to the \_\_\_\_\_. The proton has a \_\_\_\_\_ charge. In order to get the atomic mass, add the number of \_\_\_\_\_ and \_\_\_\_\_ together

For the following problems, draw a Bohr model. Label the number of protons and neutrons and draw in the number of electrons as dots in energy levels (orbits). **REMEMBER, the Bohr model is not the most accurately accepted model of an atom; it is just the easiest to draw.**

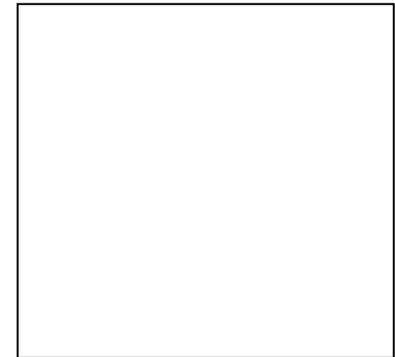
1. Lithium



2. Fluorine



3. Argon



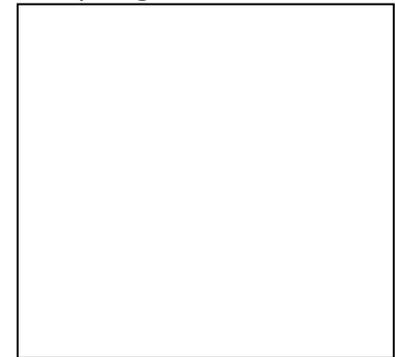
4. Boron



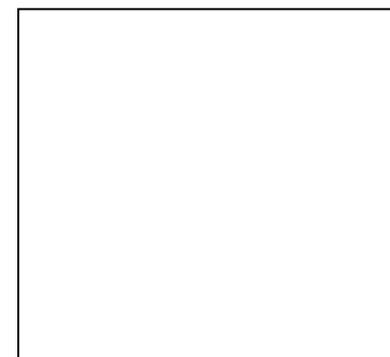
5. Beryllium



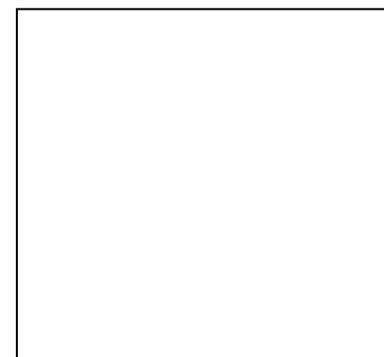
6. Hydrogen



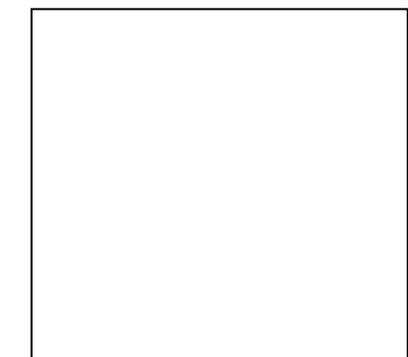
7. Phosphorus



8. Magnesium



9. Carbon



# Periodic Table of the Elements

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1 H																	2 He
3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
55 Cs	56 Ba	57 La	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
87 Fr	88 Ra	89 Ac	104 Unq	105 Unp	106 Unh	107 Uns	108 Uno	109 Une	110 Unn								

Label the following

1. Periods
2. Groups
3. Metals
4. Nonmetals
5. Halogens
6. Alkali Metals
7. Transition Metals
8. Alkaline Earth Metals
9. Rare Earth Metals
10. Nonmetals
11. Other metals
12. Metalloids

58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu
90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr