Name: _____ Date: _____

PERIODIC TABLE QUIZ REVIEW

1. Match the term with the appropriate definition. A term may be used more than once.

Atomic Mass Atomic Number Mass Number

a) The weight of the atom is referred to as the _____ _____ .
b) The number of protons plus the number of neutrons is referred to as the _____ _____ .
c) The number of protons can be determined by looking at the _____ _____ .

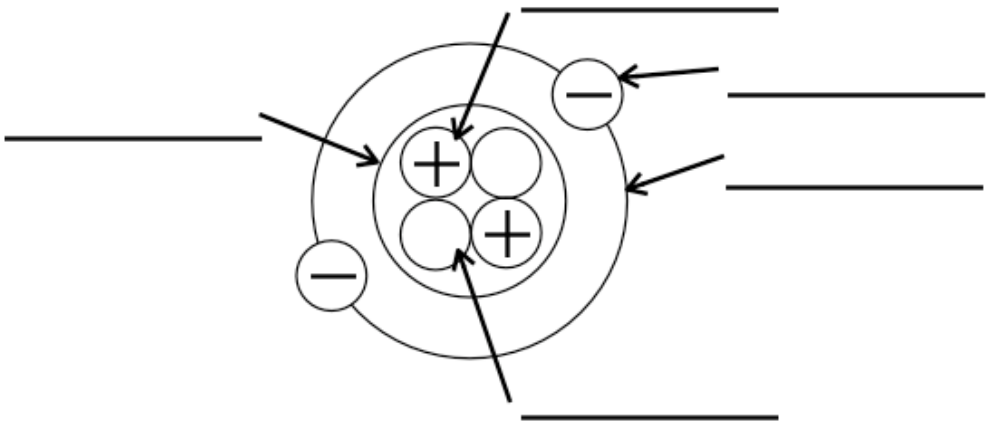
2. Match the term with the appropriate definition. A term may be used more than once.

Protons Electrons Neutrons

a) In a neutral atom, the number of protons matches the number of _____ .
b) The negative particles of an atom are _____ .
c) The positive particles of an atom are _____ .
d) The neutral particles of an atom are _____ .
e) The _____ and _____ are in the nucleus of the atom.
f) The _____ orbit around the atom in energy shells called orbitals.
g) Isotopes, or types, of the same element have different numbers of _____ .
h) Gaining or losing _____ creates charged atoms called ions.
i) The identity of an atom is determined by its number of _____ .

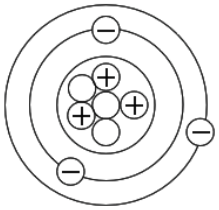
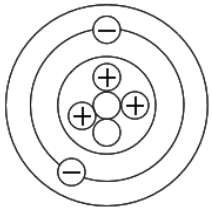
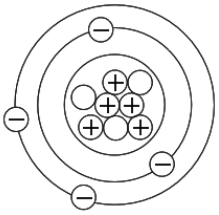
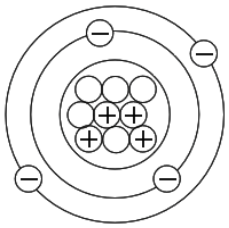
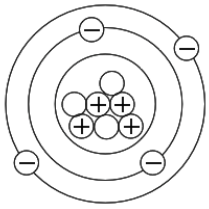
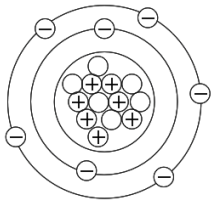
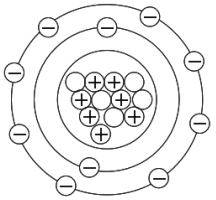
3. Label the parts of the atom using the words below:

Proton Electron Neutron Nucleus Orbital



4. Answer the following questions based on the element given in question 3.
a) What is the atomic number of the element? _____
b) What is the identity of the element? _____
c) Is the element neutral or charged? _____
d) What group does this element belong to? _____
e) What is another name for this group? _____
f) What is special about this group of the periodic table? _____

5. Fill out the chart for each given element.

	Atomic #	Element	# p^+	# n^0	# e^-	Mass #	Charge
							
							
							
							
							
							
							

6. Fill out the chart for each given isotope.

	Element	Atomic #	Mass Number	# Neutrons
Silicon - 28				
Silicon - 29				
$^{87}_{37}Rb$				
$^{115}_{49}In$				
Carbon - _____				8

7. Calculate the average atomic mass for each element.

a) Copper-63 has a mass of 62.9296 amu and an abundance of 69.17%. Copper-65 has a mass of 64.9278 amu and an abundance of 30.83%. What is the average atomic mass of copper?

b) Gallium-69 has a mass of 68.9256 amu and an abundance of 60.108%. Gallium-71 has a mass of 70.9247 amu and an abundance of 39.892%. What is the average atomic mass of gallium?

8. State if the given property belongs to a metal or non-metal.

	Metal	Non-Metal		Metal	Non-Metal
Malleable			Poor Conductor		
Ductile			Good Conductor		
Dull			Good Insulator		
Shiny			Powdery		

9. Answer the questions below pertaining to the periodic table.

a) What is the difference between groups and periods?

b) Do elements have similar properties if they are in the same group, or the same period?

c) What are valence electrons?

d) Which indicates the number of valence electrons, the group number or period number?

e) What is an orbital?

f) What happens to the number of orbitals going across a period?

g) What happens to the number of orbitals going down a group?

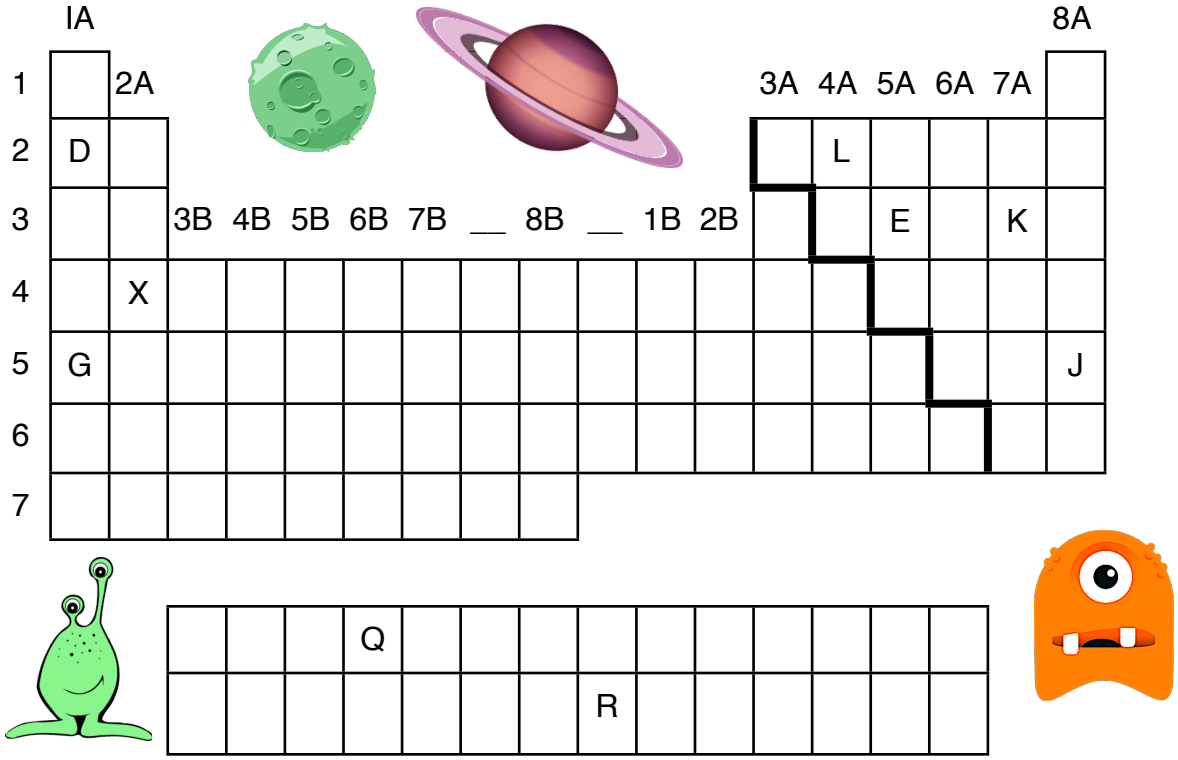
h) What happens to the number of valence electrons going across a period?

i) What happens to the number of valence electrons going down a group?

10. Draw Bohr-Rutherford and Lewis Diagrams for the given elements. Assume that the number of protons is equal to the number of neutrons.

	Nitrogen	Chlorine	Calcium
Bohr			
Lewis			

11. The periodic table below was discovered on a mysterious planet with many unknown elements. Determine the properties of the mysterious elements using the patterns of the periodic table that you already know.



a) Which element has 2 valence electrons?

b) Which element is a lanthanide?

c) Which two elements have similar properties?

d) Which elements are in the same period?

e) Which two elements both have 5 orbitals?

f) Which two elements both have 3 orbitals?

g) Which element is an actinide?

h) Which elements are non-metals?

i) Which element would be non-reactive?

j) Which element has 4 valence electrons?

k) How many valence electrons does "L" have?

l) Which element would have a 1- charge?

m) How many orbitals does "X" have?

n) What charge will "D" probably take on?

12. What two conditions must be met for an atom to be "happy"?

13. Why do atoms bond?

14. For each element, draw the Bohr diagram for the neutral atom and the charged atom.

	Neutral Atom	Easier to have a full/ empty outer shell?	Easier to gain/ lose?	Charged Atom
Helium				
Potassium				
Lithium				
Sodium				
Chlorine				
Neon				