

Name: _____

UNIT 2 TEST REVIEW

Period _____

Periodic Table of Elements

	1	2	13	14	15	16	17	18
1								
2								
3								
4								
5								
6								

Use the following clues to determine where each of the letters would appear on the periodic table.

- A is an alkaline earth metal who has one less proton than neutrons.
- B is a period 3 element which contains 4 electrons in the outer shell.
- C is a group 1 metal that is slightly more reactive than L.
- D is a gas that needs one more electron to fill its outer shell.
- E is in group 15 period 4.
- F is a noble gas you can buy at the school store.
- G is a gas which is the main gas in the atmosphere.
- H has twice the atomic mass and atomic number as bb and is found in the same group as bb.
- I has an electron configuration that ends with $5p^4$.
- J is explosive in balloons.
- K contains 50 neutrons.
- M is in group 13 and is slightly larger than cc.
- N has higher electronegativity than A and is in the same period as A.
- O is one of two elements having 16 neutrons.
- P is the largest atom in family 15.
- Q has the lowest electronegativity in his family which also contains N and M.
- R has an uncertain atomic mass in group 16.
- S is a noble gas in the same period as K.
- T has 6 electrons in its outer shell.
- U is an element which burns with a bright white flame.
- V is a noble gas found at many pizza places.
- W's atomic radius is bigger than C but less than X. C, W, and X are in the same family
- Y is the least reactive solid alkali metal.
- Z is an element with a higher atomic mass than the element with higher atomic number.
- aa is the most reactive nonmetal.
- bb is needed for life.
- cc is an element used for leftovers.
- dd is produced when sulfuric acid is added to sugar.
- ee is the largest halogen solid.
- ff has seven electrons the outer shell.
- gg brings good things to life.
- hh has one less proton than ii which has one less proton than jj.
- kk is a liquid halogen.
- ll is dangerous for superman.
- mm is good for teeth and bones.
- nn has four times the atomic number of B.
- oo is a noble gas you don't want in your basement.
- pp - If you are not done by now get this out!!!

1. Isotope	A. An average of all the isotopes; the mass of average atom.	How many valence electrons? Helium (___) _____ Lithium (___) _____ Calcium (___) _____ Aluminum (___) _____ Sulfur (___) _____ Nitrogen (___) _____ Calcium and _____ have the same reactivity. Oxygen and _____ have the same reactivity. Helium and _____ have the same reactivity.
2. Atomic mass	B. An atom with an equal number of electrons and protons.	
3. Atomic #	C. An atom with more or less electrons than protons.	
4. Neutral atom	D. A variation of an element with a different number of neutrons.	
5. Ion	E. Total number of protons and neutrons in the nucleus.	
6. Mass #	F. Number of protons; determines the element.	

1. Bohr	A. Discovered that atoms have a nucleus.
2. Dalton	B. Realized that there was a smallest part of matter.
3. Democritus	C. Discovered that electrons are in distinct orbits.
4. Rutherford	D. Discovered the electron.
5. Thompson	E. Theorized that atoms cannot be changed chemically.

Metal or Non-metal?

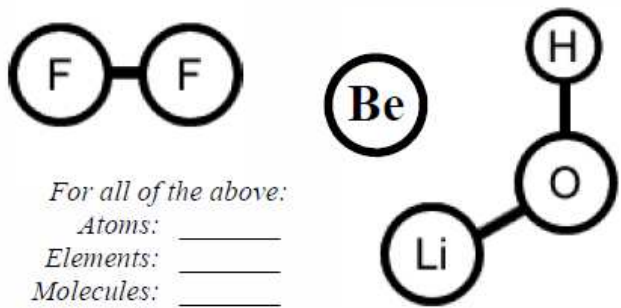
___ Titanium (___)	___ Neon (___)
___ Sodium (___)	___ Hydrogen (___)
___ Chlorine (___)	___ Nickel (___)

8 protons and 10 electrons. *Neutral atom or ion?*
 16 protons and 18 electrons. *Neutral atom or ion?*
 20 protons and _____ electrons. *Neutral atom or ion?*

Give the element abbreviation and charge.
 16 protons and 18 electrons: Element: ___ Charge: _____.
 35 protons and 36 electrons: Element: ___ Charge: _____.
 Nitrogen with 10 electrons. Charge: _____.

A 35 N object feels like 30 N when lowered into a liquid. How much b_____ force does the liquid give?

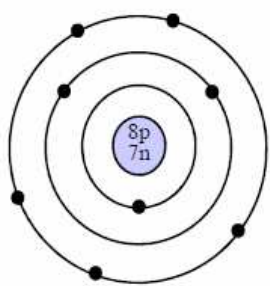
If put into a more v_____ liquid, the object would feel even lighter.



For all of the above:
 Atoms: _____
 Elements: _____
 Molecules: _____
 Compounds: _____

“Atoms are solid.” Respond and give reasons for your response.

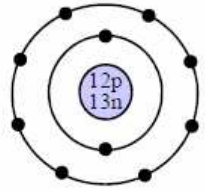
What is wrong with this picture of an atom?



Are these different elements?
 Element A: 17 protons; 18 electrons; 16 neutrons.
 Element B: 18 protons; 18 electrons; 18 neutrons.
Why?

Are these different isotopes of one another?
 Element A: 12 protons; 11 electrons; 13 neutrons.
 Element B: 12 protons; 12 electrons; 14 neutrons.
Why?

Are these different isotopes of one another?
 Element A: 18 protons; 18 electrons; 18 neutrons.
 Element B: 19 protons; 18 electrons; 19 neutrons.
Why?



Element: _____
 # of neutrons: _____
 Mass #: _____
 # of electrons: _____
 # of valence electrons: _____
 It is an ion? _____

Calcium (___) is in row _____. Calcium has _____ complete electron levels and _____ valence electrons in level _____.

Sulfur (___) is in row _____. Argon has _____ complete electron levels and _____ valence electrons in level _____.