

New West Charter High School -- Chem/Honors -- Unit 6 -- Quest #5 -- 55/70 points

Write TRUE if the statement is true, OR write the word(s) that substitutes for the underlined word(s) that would make it true. Writing false only earns partial credit. Three points apiece. And BE NEAT!

- _____ 1) The ionic bond is mostly like formed between a metal and a non-metal.
- _____ 2) Carbon dioxide is non-polar because it is symmetrical.
- _____ 3) A polyatomic ion always has a positive or negative charge.
- _____ 4) A carbon triple bond means that there are three electrons being shared between carbons.
- _____ 5) An electron “sea” is most commonly found in covalent bonds.

Short Answer - Fill-in -- three points each. And be neat! If I can't read it, you don't score!

- 6) The over-arching characteristic of atoms which determine their trending properties has most of all to do with their _____.
- 7) An anion is larger than its corresponding atom because _____
_____.
- 8) What are the two reasons a cation is smaller than its corresponding atom? _____
_____.
- 9) Why does ionization energy decrease as you move down a column in the periodic table? _____
_____.
- 10) What makes a compound polar? _____
_____.

Multiple Choice. Write the letter in the blank that best answers each problem. Three points each.

- _____ 11) The name of the yellow compound formed in demonstration was _____.
a) lead nitrate b) calcium acetate c) magnesium sulfate d) lead iodide

_____ 12) Electronegativity decreases as one moves _____ across the Periodic Table.

- a) up and right b) down and left c) up and left d) down and right

_____ 13) Covalent bonds _____.

- a) share electron pairs b) donate H⁺ ions c) transfer electrons d) dissociate easily

_____ 14) When more of a particular solute will dissolve at lower temperatures, it is an example of

- a) sublimation. b) the liquid's density. c) reverse solubility. d) conservation.

_____ 15) The geometry of methane, CH₄, would be _____.

- a) trigonal planar b) tetrahedral c) square cross d) trigonal pyramid

16) For three points each, draw the Lewis dot diagram for each of the following:



17) A perfect cube of gold, exactly one foot on a side has what mass? Its density is 19.32 g/cm³ and there are 2.54 cm in one inch. Four points.

Honors Section. Three points each.

18) What two molecular geometries are most likely to give rise to an exception to the octet rule?

19) What does VSEPR stand for and what is it? _____

20) Draw the Lewis dot diagram for each of the following:



21) What is the diameter of a perfect sphere of silver if it has a mass of 50.00 kg? Its density is 10.87 g/cm³.