

Name: _____

Naming Covalent Compounds Worksheet (Chapter 6.5)

Rules for Naming Covalent Compounds

Rule 1. The element with the lower electronegativity value is written first in the name; the element with the higher electronegativity value is written second.

Exception: when the compound contains oxygen and a halogen, the name of the halogen is the first word in the name.

Rule 2. The second element in the name gets an ide ending to the name of the element.

Rule 3. Greek prefixes (see the Table below) are used to indicate the number of atoms of each nonmetal element in the chemical formula for the compound.

Exception: if the compound contains one atom of the element that is written first in the name, the prefix "mono-" is not used.

Note: when the addition of the Greek prefix places two vowels adjacent to one another, the "a" (or the "o") at the end of the Greek prefix is usually dropped; e.g., "nonaoxide" would be written as "nonoxide", and "monooxide" would be written as "monoxide". The "i" at the end of the prefixes "di-" and "tri-" are never dropped.

The above information is for you to learn. The below information you will always have available to you on the back of your periodic table.

prefix	number indicated
<i>Mono-</i>	1
<i>di-</i>	2
<i>tri-</i>	3
<i>Tetra-</i>	4
<i>penta-</i>	5
<i>Hexa-</i>	6
<i>hepta-</i>	7
<i>Octa-</i>	8
<i>Nona-</i>	9
<i>Deca-</i>	10

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Write the formulas for the following covalent compounds:

1. antimony tribromide _____
2. hexaboron monosilicide _____
3. chlorine dioxide _____
4. hydrogen moniodide _____
5. iodine pentafluoride _____
6. dinitrogen trioxide _____
7. phosphorus triiodide _____
8. dichlorine pentoxide _____
9. phosphorus trichloride _____
10. selenium tetrafluoride _____
11. silicon dioxide _____
12. carbon monoxide _____
13. dinitrogen pentoxide _____

Write the names for the following covalent compounds:

1. P_4S_5 _____
2. NO_2 _____
3. SeF_6 _____
4. Si_2Br_6 _____
5. SCl_4 _____
6. CH_4 _____
7. B_2Si _____
8. NF_3 _____
9. CO_2 _____
10. NI_3 _____
11. N_2H_4 _____
12. BF_3 _____
13. Cl_2O_7 _____