

Naming and Formula Writing Review Name _____ HR _____

YOU MUST MEMORIZE YOUR POLYATOMICS AND SYMBOLS FOR THIS TEST!! YOU SHOULD LABEL YOUR TABLE WITH COMMON ION CHARGES WHEN YOU GET YOUR PERIODIC TABLE! HAVE A METHOD BY WHICH TO NAME AND WRITE THE FORMULAS. GET TO HELP ROOM!

1. What metals DO NOT require roman numerals in their name?

2. What are the first 10 prefixes for the covalent naming system?

| | | | |
|---|--|----|--|
| 1 | | 6 | |
| 2 | | 7 | |
| 3 | | 8 | |
| 4 | | 9 | |
| 5 | | 10 | |

3. What is the first question you should ask before attempting to name ANY of the compounds on this test?

4. Name the following compounds and answer any questions that follow:

a. $\text{Sr}(\text{NO}_2)_2$ _____

i. Why are roman numerals not required for this name?

ii. Why doesn't Sr have a subscript label of "1"?

b. TiO_2 _____

i. This name requires a roman numeral. Explain why?

ii. Why is the roman numeral not II?

c. CCl_4 _____

i. Why does carbon not receive a prefix for this name?

d. $(\text{NH}_4)_3\text{PO}_4$ _____

i. This compound does not contain a metal, yet it is named as an ionic compound. Why?

e. Si_2O_4 _____

i. Why is this compound not reduced to a 1:2 ratio?

DO NOT DETACH FROM BOOK.

PERIODIC TABLE OF THE ELEMENTS

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|
| 1 | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| H 1.008 | | | | | | | | | | | | | | | | | He 4.00 | | | | | | | | | | | | | | | | | | |
| 3 | Li | 4 | Be | | | | | | | | | | | | | | | | | 5 | B | 6 | C | 7 | N | 8 | O | 9 | F | 10 | Ne | | | | |
| 6.94 | 6.94 | 9.01 | 9.01 | | | | | | | | | | | | | | | | | 10.81 | 10.81 | 12.01 | 12.01 | 14.01 | 14.01 | 16.00 | 16.00 | 19.00 | 19.00 | 20.18 | | | | | |
| 11 | Na | 12 | Mg | | | | | | | | | | | | | | | | | 13 | Al | 14 | Si | 15 | P | 16 | S | 17 | Cl | 18 | Ar | | | | |
| 22.99 | 22.99 | 24.30 | 24.30 | | | | | | | | | | | | | | | | | 26.98 | 26.98 | 28.09 | 28.09 | 30.97 | 30.97 | 32.06 | 32.06 | 35.45 | 35.45 | 39.95 | | | | | |
| 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 |
| 39.10 | 39.10 | 40.08 | 40.08 | 44.96 | 44.96 | 47.90 | 47.90 | 50.94 | 50.94 | 52.00 | 52.00 | 54.94 | 54.94 | 55.85 | 55.85 | 58.93 | 58.93 | 58.69 | 58.69 | 63.55 | 63.55 | 65.39 | 65.39 | 69.72 | 69.72 | 72.59 | 72.59 | 74.92 | 74.92 | 78.96 | 78.96 | 79.90 | 79.90 | 83.80 | |
| 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 |
| 85.47 | 85.47 | 87.62 | 87.62 | 88.91 | 88.91 | 91.22 | 91.22 | 92.91 | 92.91 | 95.94 | 95.94 | (98) | (98) | 101.1 | 101.1 | 102.91 | 102.91 | 106.42 | 106.42 | 107.87 | 107.87 | 112.41 | 112.41 | 114.82 | 114.82 | 118.71 | 118.71 | 121.75 | 121.75 | 127.60 | 127.60 | 126.91 | 126.91 | 131.29 | |
| 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 |
| 132.91 | 132.91 | 137.33 | 137.33 | 138.91 | 138.91 | 178.49 | 178.49 | 180.95 | 180.95 | 183.85 | 183.85 | 186.21 | 186.21 | 190.2 | 190.2 | 192.22 | 192.22 | 195.08 | 195.08 | 196.97 | 196.97 | 200.59 | 200.59 | 204.38 | 204.38 | 207.2 | 207.2 | 208.98 | 208.98 | (209) | (209) | (210) | (210) | (222) | |
| 87 | Fr | 88 | Ra | 89 | †Ac | 104 | Rf | 105 | Db | 106 | Sg | 107 | Bh | 108 | Hs | 109 | Mt | 110 | Ds | 111 | Rg | | | | | | | | | | | | | | |
| (223) | (223) | 226.02 | 226.02 | 227.03 | 227.03 | (261) | (261) | (262) | (262) | (266) | (266) | (264) | (264) | (277) | (277) | (268) | (268) | (271) | (271) | (272) | (272) | | | | | | | | | | | | | | |

*Lanthanide Series

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 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 |
| 140.12 | 140.12 | 140.91 | 140.91 | 144.24 | 144.24 | (145) | (145) | 150.4 | 150.4 | 151.97 | 151.97 | 157.25 | 157.25 | 158.93 | 158.93 | 162.50 | 162.50 | 164.93 | 164.93 | 167.26 | 167.26 | 168.93 | 168.93 | 173.04 | 173.04 | 174.97 | 174.97 |
| 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 |
| 232.04 | 232.04 | 231.04 | 231.04 | 238.03 | 238.03 | (237) | (237) | (244) | (244) | (243) | (243) | (247) | (247) | (247) | (247) | (251) | (251) | (252) | (252) | (257) | (257) | (258) | (258) | (259) | (259) | (262) | (262) |

†Actinide Series

5. THE LAST PAGE OF THIS REVIEW HAS A SPOT FOR YOUR ANSWERS TO THIS QUESTION. PUT YOUR ANSWERS IN THAT CHART! What is wrong with the following name and formula combinations: State what is wrong and provide the correct name and formula! **ONE thing is wrong with each set.**

- | | |
|---------------------|--------------------------------|
| a. Mg_2O_2 | Magnesium Oxide |
| b. $Be(CO_3)$ | Beryllium Carbonate |
| c. $FeSO_4$ | Iron Sulfate |
| d. NO_2 | Mononitrogen Dioxide |
| e. $Cu(II)SO_3$ | Copper (II) Sulfit |
| f. P_2S_5 | Diphosphorus pentasulfur |
| g. $Na^{+1}Cl^{-1}$ | Sodium Chloride |
| h. $LiClO$ | Lithium chloride |
| i. Cr_3PO_{42} | Chromium (II) Phosphate |
| j. $AgNO_3$ | Silver (I) Nitrate |
| k. NH_4HCO_3 | Nitrogen hydrogen carbon oxide |

6. Pure Practice Naming – YOU MUST HAVE YOUR POLY'S AND ELEMENTS MEMORIZED!

- | | |
|-------------------|-------|
| a. K_2SO_4 | _____ |
| b. CO_3N_2 | _____ |
| c. S_2P_6 | _____ |
| d. $(NH_4)_3PO_3$ | _____ |
| e. ZnO | _____ |
| f. $AlBr_3$ | _____ |
| g. BeF_2 | _____ |
| h. $Pb(ClO_3)_4$ | _____ |
| i. BF_3 | _____ |
| j. $Sn(HCO_3)_2$ | _____ |

7. Pure Practice Formulas

- | | |
|-------------------------------|-------|
| a. Cesium phosphite | _____ |
| b. Tricarbon octahydride | _____ |
| c. Xenon hexafluoride | _____ |
| d. Silver acetate | _____ |
| e. Chromium (III) perchlorate | _____ |
| f. Barium Nitrite | _____ |
| g. Ammonium bicarbonate | _____ |
| h. Iodine heptanitride | _____ |
| i. Gold (IV) Sulfate | _____ |
| j. Nickel (II) hypochlorite | _____ |

Naming and Formula Writing Review

Name _____

HR _____

| Given Name and Formula | Corrected Name or Formula | Reason for the Correction |
|---|---------------------------|---------------------------|
| Mg ₂ O ₂ Magnesium Oxide | | |
| Be(CO ₃) Beryllium Carbonate | | |
| FeSO ₄ Iron Sulfate | | |
| NO ₂ Mononitrogen Dioxide | | |
| Cu(II)SO ₃ Copper (II) Sulfite | | |
| P ₂ S ₅ Diphosphorus pentasulfur | | |
| Na ⁺¹ Cl ⁻¹ Sodium Chloride | | |
| LiClO Lithium chloride | | |
| Cr ₃ PO ₄₂ Chromium (II) Phosphate | | |
| AgNO ₃ Silver (I) Nitrate | | |
| NH ₄ HCO ₃ Nitrogen hydrogen carbon oxide | | |