

Name _____

Date _____

Nomenclature Review Worksheet

I. Binary Compounds

- A. **MNM**- 1) name of 1st element
2) root of name of 2nd element with -ide ending

Ex. CaO calcium oxide
K₂S potassium sulfide

Name the following:

Write formulas for the following

- | | |
|----------------------------|-----------------------------|
| 1. NaF _____ | 11. Aluminum chloride _____ |
| 2. K ₂ O _____ | 12. Lithium sulfide _____ |
| 3. LiBr _____ | 13. Calcium phosphide _____ |
| 4. CaCl ₂ _____ | 14. Barium fluoride _____ |
| 5. BaS _____ | 15. Potassium oxide _____ |
| 6. BaF ₂ _____ | 16. Sodium bromide _____ |
| 7. Na ₂ S _____ | 17. Barium nitride _____ |
| 8. MgI ₂ _____ | 18. Lithium oxide _____ |
| 9. K ₃ N _____ | 19. Aluminum oxide _____ |
| 10. BeSe _____ | 20. Rubidium iodide _____ |

- B. **TmNm** 1) name of transition metal with Roman numeral
2) root of nonmetal with -ide ending

Ex. CuO copper (II) oxide
Fe₂O₃ Iron (III) oxide

Name the following:

Write formulas for the following:

- | | |
|---|--------------------------------|
| 1. CuCl _____ | 11. Mercury (II) sulfide _____ |
| 2. CuCl ₂ _____ | 12. Copper(II) nitride _____ |
| 3. FeO _____ | 13. Iron(III) bromide _____ |
| 4. MnS _____ | 14. Mercury(I) oxide _____ |
| 5. Cr ₂ O ₃ _____ | 15. Silver fluoride _____ |
| 6. NiF ₂ _____ | 16. Copper(II) oxide _____ |
| 7. SnCl ₄ _____ | 17. Chromium(III) oxide _____ |
| 8. Ag ₃ P _____ | 18. Nickel(II) bromide _____ |
| 9. ZnS _____ | 19. Tin (IV) sulfide _____ |
| 10. Hg ₂ Cl ₂ _____ | 20. Zinc oxide _____ |

- C. **NmNm** – 1. Name of 1st element (with prefix if more than one atom)
 2. prefix for number of atoms- root of nonmetal name –ide ending

mon(o)- 1 tri- 3 penta-5
 di- 2 tetra- 4 hex(a)- 6

ex. N₂O – dinitrogen monoxide; NO₂ nitrogen dioxide

Name the following:

Write formulas for the following:

- | | |
|--|-------------------------------------|
| 1. SO ₃ _____ | 11. Sulfur dioxide _____ |
| 2. AsCl ₃ _____ | 12. Phosphorous trichloride _____ |
| 3. N ₂ O ₃ _____ | 13. Nitrogen monoxide _____ |
| 4. P ₂ O ₅ _____ | 14. Carbon tetrafluoride _____ |
| 5. GeCl ₄ _____ | 15. Dinitrogen pentoxide _____ |
| 6. XeF ₆ _____ | 16. Sulfur trioxide _____ |
| 7. SF ₄ _____ | 17. Carbon monoxide _____ |
| 8. NO ₃ _____ | 18. Phosphorous pentachloride _____ |
| 9. SiO ₂ _____ | 19. Arsenic tribromide _____ |
| 10. CO _____ | 20. Nitrogen triiodide _____ |

II. **Compounds with Polyatomic Ions (ternary)**

- name the 2 parts (ion names)

ex. NH₄Cl ammonium chloride

Ca(NO₃)₂ calcium nitrate

Name the following:

Write the formulas for the following:

- | | |
|--|---------------------------------|
| 1. (NH ₄) ₂ CO ₃ _____ | 11. Aluminum sulfate _____ |
| 2. BaSO ₄ _____ | 12. zinc nitrite _____ |
| 3. Li ₂ SO ₃ _____ | 13. Magnesium chlorate _____ |
| 4. CrPO ₄ _____ | 14. Sodium bicarbonate _____ |
| 5. NaC ₂ H ₃ O ₂ _____ | 15. Calcium hydroxide _____ |
| 6. BaOH _____ | 16. Copper (II) carbonate _____ |
| 7. Fe(NO ₃) ₃ _____ | 17. Ammonium sulfide _____ |
| 8. KCN _____ | 18. Iron (III) acetate _____ |
| 9. SrCrO ₄ _____ | 19. lithium bisulfate _____ |
| 10. CaCr ₂ O ₇ _____ | 20. Strontium phosphate _____ |

III. **Acids** -ate → ic ite → ous -ide → ic

per more Oxygen hypo less oxygen; binary use hydro

- | | |
|--|------------------------------|
| 1. H ₂ CO ₃ _____ | 11. hydrosulfuric _____ |
| 2. H ₂ SO ₄ _____ | 12. Hypochlorous acid _____ |
| 3. H ₂ SO ₃ _____ | 13. Perbromic acid _____ |
| 4. H ₃ PO ₄ _____ | 14. Carbonic acid _____ |
| 5. HC ₂ H ₃ O ₂ _____ | 15. Iodic acid _____ |
| 10. HI _____ | 16. Hydrofluoric acid _____ |
| 11. H ₂ S _____ | 17. Phosphorous Acid _____ |
| 12. KCN _____ | 18. Iron (III) acetate _____ |

Name _____

Compounds with Polyatomic Ions

I. Give the correct formula and charge for each polyatomic ion listed below

- | | |
|--------------------|--------------------|
| 1. ammonium _____ | 5. Hydroxide _____ |
| 2. acetate _____ | 6. Nitrate _____ |
| 3. carbonate _____ | 7. Phosphate _____ |
| 4. chlorate _____ | 8. Sulfate _____ |

II. Complete the chart below by 1st supplying the correct formula and charge for each ion and 2nd write the formula for the compounds that would form from the combination of the positive and negative ions. REMEMBER, if a polyatomic ion needs another subscript, you must use parentheses!

- | | | |
|--------------------------|-------|-------|
| 1. sodium chlorate | _____ | _____ |
| 2. calcium chlorate | _____ | _____ |
| 3. ammonium chlorate | _____ | _____ |
| 4. potassium chlorate | _____ | _____ |
| 5. copper(II) chlorate | _____ | _____ |
| 6. silver chlorate | _____ | _____ |
| 7. sodium sulfate | _____ | _____ |
| 8. calcium sulfate | _____ | _____ |
| 9. ammonium sulfate | _____ | _____ |
| 10. potassium sulfate | _____ | _____ |
| 11. copper(II) sulfate | _____ | _____ |
| 12. silver sulfate | _____ | _____ |
| 13. sodium phosphate | _____ | _____ |
| 14. calcium phosphate | _____ | _____ |
| 15. ammonium phosphate | _____ | _____ |
| 16. copper(II) phosphate | _____ | _____ |
| 17. silver phosphate | _____ | _____ |
| 18. sodium chloride | _____ | _____ |
| 19. calcium chloride | _____ | _____ |
| 20. ammonium chloride | _____ | _____ |
| 21. potassium chloride | _____ | _____ |
| 22. copper(II) chloride | _____ | _____ |
| 23. silver chloride | _____ | _____ |
| 24. sodium hydroxide | _____ | _____ |
| 25. calcium hydroxide | _____ | _____ |
| 26. ammonium hydroxide | _____ | _____ |
| 27. potassium hydroxide | _____ | _____ |
| 28. copper(II) hydroxide | _____ | _____ |
| 29. silver hydroxide | _____ | _____ |

III. Name each compound

1. NaOH _____
2. MgCO₃ _____
3. FePO₄ _____
4. K₂SO₄ _____
5. (NH₄)₂CO₃ _____
6. Ca(ClO₃)₂ _____
7. LiC₂H₃O₂ _____
8. Cu(NO₃)₂ _____

IV. Write the correct formula for each compound

1. ammonium chloride _____
2. sodium sulfate _____
3. barium nitrate _____
4. copper (II) hydroxide _____
5. silver acetate _____
6. zinc phosphate _____
7. ammonium carbonate _____
8. calcium sulfate _____