

## Binary Ionic Compounds

Name: \_\_\_\_\_ Per: \_\_\_\_\_

**Directions:** First quickly scan the worksheet and circle any metals (as a symbol or as a name) that is a transition metal. Then either give the same or chemical formula as necessary for each problem below.

Remember that transition metals can have multiple oxidation states, so you are required to indicate the appropriate oxidation state in parenthesis when naming them. You must use the subscript and oxidation state of the anion to help determine the oxidation state of the transition metal.

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|--|-----------------------------------|
| 1. LiF _____                             | 2. lithium chloride _____         |
| 3. Li <sub>2</sub> O _____               | 4. lithium nitride _____          |
| 5. Li <sub>3</sub> P _____               | 6. beryllium fluoride _____       |
| 7. BeO _____                             | 8. beryllium sulfide _____        |
| 9. BF <sub>3</sub> _____                 | 10. boron chloride _____          |
| 11. BBr <sub>3</sub> _____               | 12. boron oxide _____             |
| 13. BN _____                             | 14. sodium fluoride _____         |
| 15. CuF _____                            | 16. copper (II) chloride _____    |
| 17. Cu <sub>2</sub> O _____              | 18. copper (II) oxide _____       |
| 19. Cu <sub>3</sub> N _____              | 20. copper (II) nitride _____     |
| 21. Na <sub>2</sub> O _____              | 22. sodium nitride _____          |
| 23. PbF <sub>2</sub> _____               | 24. lead (IV) fluoride _____      |
| 25. PbS _____                            | 26. lead (IV) sulfide _____       |
| 27. Pb <sub>3</sub> N <sub>4</sub> _____ | 28. lead (IV) oxide _____         |
| 29. FeF <sub>3</sub> _____               | 30. iron (II) bromide _____       |
| 31. Fe <sub>2</sub> O <sub>3</sub> _____ | 32. chromium (VI) phosphide _____ |
| 33. FeP _____                            | 34. aluminum fluoride _____       |
| 35. AlI <sub>3</sub> _____               | 36. aluminum oxide _____          |
| 37. Mn <sub>2</sub> O <sub>7</sub> _____ | 38. manganese (IV) bromide _____  |
| 39. SnSe _____                           | 40. tin (IV) oxide _____          |