

Write formulas for ionic compounds made from the following ions. Use your ion cutouts to help determine the correct ratio of ions.

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| 1. $\text{Ca}^{2+}$ and $\text{Cl}^-$ _____   | 6. $\text{Cu}^+$ and $\text{N}^{3-}$ _____     |
| 2. $\text{Mn}^{3+}$ and $\text{O}^{2-}$ _____ | 7. $\text{Co}^{2+}$ and $\text{P}^{3-}$ _____  |
| 3. $\text{Al}^{3+}$ and $\text{S}^{2-}$ _____ | 8. $\text{K}^+$ and $\text{S}^{2-}$ _____      |
| 4. $\text{Li}^+$ and $\text{Br}^-$ _____      | 9. $\text{Sr}^{2+}$ and $\text{O}^{2-}$ _____  |
| 5. $\text{Ba}^{2+}$ and $\text{F}^-$ _____    | 10. $\text{Cr}^{6+}$ and $\text{O}^{2-}$ _____ |

Use your periodic table to predict the ionic compounds made from the following elements. Hint: first determine the most likely charge on each element when it either gains or loses electrons.

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|---------------------|---------------------|
| 11. Na and Cl _____ | 16. Ga and S _____  |
| 12. Mg and Br _____ | 17. Rb and F _____  |
| 13. Al and O _____  | 18. Li and Se _____ |
| 14. Cs and As _____ | 19. Be and P _____  |
| 15. Ca and I _____  | 20. Sr and N _____  |

Write formulas for each ionic compound named below.

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|------------------------------|--------------------------------|
| 21. Sodium oxide _____       | 26. Copper (II) oxide _____    |
| 22. Strontium fluoride _____ | 27. Iron (III) chloride _____  |
| 23. Lithium sulfide _____    | 28. Zinc sulfide _____         |
| 24. Aluminum nitride _____   | 29. Nickel (III) bromide _____ |
| 25. Potassium selenide _____ | 30. Titanium (IV) oxide _____  |

Name each ionic compound from the formulas given below.

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|---------------------------------|-----------------------------------|
| 31. $\text{CaCl}_2$ _____       | 40. $\text{Al}_2\text{O}_3$ _____ |
| 32. $\text{MgBr}_2$ _____       | 41. $\text{CoCl}_2$ _____         |
| 33. $\text{Li}_2\text{O}$ _____ | 42. $\text{CuO}$ _____            |
| 34. $\text{NaI}$ _____          | 43. $\text{ZnCl}_2$ _____         |
| 35. $\text{SrF}_2$ _____        | 44. $\text{HgO}$ _____            |
| 36. $\text{PbO}_2$ _____        | 45. $\text{Na}_3\text{As}$ _____  |
| 37. $\text{MgCl}_2$ _____       | 46. $\text{Fe}_2\text{O}_3$ _____ |
| 38. $\text{NiCl}_3$ _____       | 47. $\text{SnO}_2$ _____          |
| 39. $\text{KI}$ _____           | 48. $\text{BaF}_2$ _____          |