

Name: Key

Block: _____

Date: _____

Ionic Bonding Practice

Use a periodic table and your ionic bonding notes to help you with this worksheet.

Write the correct chemical formulae for the following ionic compounds.

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|-------------------------|---|-----------------------------------|-------------------------|-----------------------------------|------------------------------|
| 1) Calcium chloride | $\text{Ca}^{2+} \text{Cl}^-$ | CaCl_2 | 18) Potassium oxide | $\text{K}^+ \text{O}^{2-}$ | K_2O |
| 2) Barium sulphide | $\text{Ba}^{2+} \text{S}^{2-}$ | BaS | 19) Copper(I) nitrate | $\text{Cu}^+ \text{NO}_3^-$ | CuNO_3 |
| 3) Cadmium(III) nitrate | $\text{Cd}^{3+} \text{NO}_3^-$ | $\text{Cd}(\text{NO}_3)_3$ | 20) Copper(II) nitrate | $\text{Cu}^{2+} \text{NO}_3^-$ | $\text{Cu}(\text{NO}_3)_2$ |
| 4) Cadmium(II) bromide | $\text{Cd}^{2+} \text{Br}^-$ | CdBr_2 | 21) Nickel(II) oxide | $\text{Ni}^{2+} \text{O}^{2-}$ | NiO |
| 5) Rubidium iodide | $\text{Rb}^{1+} \text{I}^-$ | RbI | 22) Aluminum nitride | $\text{Al}^{3+} \text{N}^{3-}$ | AlN |
| * 6) Gallium arsenide | $\text{Ga}^{3+} \text{As}^{3-}$ | GaAs | 23) Sodium astatide | $\text{Na}^+ \text{At}^-$ | NaAt |
| 7) Potassium sulphate | $\text{K}^+ \text{SO}_4^{2-}$ | K_2SO_4 | 24) Iron(III) carbonate | $\text{Fe}^{3+} \text{CO}_3^{2-}$ | $\text{Fe}_2(\text{CO}_3)_3$ |
| 8) Potassium sulphite | $\text{K}^+ \text{SO}_3^{2-}$ | K_2SO_3 | 25) Radium chloride | $\text{Ra}^{2+} \text{Cl}^-$ | RaCl_2 |
| 9) Magnesium oxide | $\text{Mg}^{2+} \text{O}^{2-}$ | MgO | 26) Cadmium(III) oxide | $\text{Cd}^{3+} \text{O}^{2-}$ | Cd_2O_3 |
| 10) Cobalt(II) bromide | $\text{Co}^{2+} \text{Br}^-$ | CoBr_2 | 27) Calcium bromide | $\text{Ca}^{2+} \text{Br}^-$ | CaBr_2 |
| 11) Calcium phosphate | $\text{Ca}^{2+} \text{PO}_4^{3-}$ | $\text{Ca}_3(\text{PO}_4)_2$ | 28) Silver perchlorate | $\text{Ag}^+ \text{ClO}_4^-$ | AgClO_4 |
| 12) Aluminum sulphide | $\text{Al}^{3+} \text{S}^{2-}$ | Al_2S_3 | 29) Calcium selenide | $\text{Ca}^{2+} \text{Se}^{2-}$ | CaSe |
| 13) Aluminum hydroxide | $\text{Al}^{3+} \text{OH}^-$ | $\text{Al}(\text{OH})_3$ | 30) Strontium iodide | $\text{Sr}^{2+} \text{I}^-$ | SrI_2 |
| 14) Calcium phosphide | $\text{Ca}^{2+} \text{P}^{3-}$ | Ca_3P_2 | 31) Tin(IV) chlorate | $\text{Sn}^{4+} \text{ClO}_3^-$ | $\text{Sn}(\text{ClO}_3)_4$ |
| 15) Cesium fluoride | $\text{Cs}^+ \text{F}^-$ | CsF | 32) Ammonium carbonate | $\text{NH}_4^+ \text{CO}_3^{2-}$ | $(\text{NH}_4)_2\text{CO}_3$ |
| 16) Sodium oxalate | $\text{Na}^+ \text{C}_2\text{O}_4^{2-}$ | $\text{Na}_2\text{C}_2\text{O}_4$ | 33) Zinc oxide | $\text{Zn}^{2+} \text{O}^{2-}$ | ZnO |
| 17) Aluminum iodide | $\text{Al}^{3+} \text{I}^-$ | AlI_3 | 34) Silver phosphide | $\text{Ag}^+ \text{P}^{3-}$ | Ag_3P |

Write the chemical names for following ionic compounds:

35) NaBr

Sodium bromide

36) K_2HPO_4

Potassium monohydrogen phosphate

37) $ZnSO_3$

Zinc sulphite

38) $ZnSO_4$

Zinc sulphate

39) $Ba(HSO_3)_2$

Barium hydrogen sulphite (or Barium bisulphite)

40) $PbSO_4$

Lead(II) sulphate

41) NiO

Nickel(II) oxide

42) $Sn(NO_2)_2$

Tin(II) nitrite

43) Hg_2O

Mercury(I) oxide

44) Au_2S

Gold(I) sulphide

45) MgH_2

Magnesium hydride

46) $KMnO_4$

Potassium permanganate

47) Cu_3PO_4

Copper(I) phosphate

48) $Fe(HSO_4)_2$

Iron(II) hydrogen sulphate (or Iron(II) bisulphate)

49) $Ag_2Cr_2O_7$

Silver dichromate

50) $FePO_4$

Iron(III) phosphate

51) CuSe

Copper(II) selenide

52) $Ca(ClO)_2$

Calcium hypochlorite