Naming Chemical Compounds

Naming Simple Binary Compounds

Name each of the following simple binary compounds.

1. Na_2O
2. Li_2O
3. SrO
4. Al_2O_3
5. NaCl
6. MgS
7. $CaBr_2$
8. K_3P
9. RbCl
10. Sr_3P_2
11. Na_2S
12. KI
13. CaO
14. BeI_2
15. $AlCl_3$
16. AlP
17. LiBr
18. Rb_3N
19. RbF
20. Al_2P_3

Creating Simple Binary Formulas

Write formulas for each of the following simple binary compounds.

1. Lithium sulphide
2. Potassium bromide
3. Cesium iodide
4. Calcium phosphide
5. Sodium fluoride
6. Strontium oxide
7. Beryllium sulphide
8. Magnesium bromide
9. Lithium oxide
10. Strontium chloride
11. Hydrogen nitride
12. Potassium chloride
13. Lithium nitride
14. Beryllium oxide
15. Sodium iodide
16. Magnesium oxide
17. Potassium chloride
18. Calcium sulphide
19. Rubidium oxide
20. Strontium nitride

Writing Names for Compounds with Polyatomic Ions
Write the chemical formula using the given ions.

1. NH_4^+ and PO_4^{3-}
2. H^+ and BO_3^{3-}
3. Li^+ and CO_3^{2-}
4. Na^+ and SO_4^{2-}
5. K^+ and CrO_4^{2-}
6. Rb^+ and $Cr_2O_7^{2-}$
7. Cs^+ and HPO_4^{2-}
8. Be^{2+} and $Cr_2O_7^{2-}$
9. Mg^{2+} and CrO_4^{2-}
10. B^{3+} and HPO_4^{2-}
11. Ca^{2+} and SO_4^{2-}
12. Sr^{2+} and CO_3^{2-}
13. Ba^{2+} and BO_3^{3-}
14. B^{3+} and PO_4^{3-}
15. NH_4^+ and HPO_4^{2-}
16. H+ and $Cr_2O_7^{2-}$
17. Rb^+ and CO_3^{2-}
18. Ca^{2+} and HPO_4^{2-}
19. B^{3+} and $Cr_2O_7^{2-}$
20. Be^{2+} and BO_3^{3-}

Writing Chemical Formulas for Compounds with Polyatomic Ions
Write the chemical formula for each of the following ionic compounds.

1. Ammonium borate
2. Potassium phosphate
3. Beryllium sulphate
4. Hydrogen chromate
5. Sodium monohydrogen phosphate
6. Boron chromate
7. Potassium dichromate
8. Hydrogen phosphate
9. Cesium borate
10. Sodium carbonate
11. Strontium dichromate
12. Barium monohydrogen phosphate
13. Barium chromate
14. Lithium sulphate

Naming Chemical Compounds with Polyatomic Ions

Name each of the following ionic compounds.

1. $(NH_4)_2CO_3$
2. Rb_2HPO_4
3. $Li_2Cr_2O_7$
4. $MgHPO_4$
5. $SrHPO_4$
6. Na_3BO_3
7. H_2SO_4
8. $Sr_3(PO_4)_2$
9. Rb_3PO_4
10. Rb_2CrO_4
11. $MgCr_2O_7$
12. $(NH_4)_2Cr_2O_7$
13. Cs_2CO_3
14. $Ca_3(BO_3)_2$
15. $SrCrO_4$
16. $B_2(CO_3)_3$

Writing Formulas for Compounds with Polyatomic Ions

Write the chemical formula for the following ionic compounds.

1. Ammonium cyanide
2. Potassium nitrate
3. Beryllium hydroxide
4. Cesium permanganate
5. Boron iodate
6. Sodium bicarbonate
7. Rubidium dihydrogen phosphate
8. Ammonium hydroxide
9. Sodium chlorate
10. Rubidium iodate
11. Potassium permanganate
12. Cesium bicarbonate
13. Sodium hydroxide
14. Hydrogen cyanide
15. Barium bisulphate
16. Cesium nitrate
17. Magnesium permanganate
18. Calcium cyanide

Naming Compounds with Polyatomic Ions

Name each of the following ionic compounds.

1. HOH
2. $LiCN$
3. $RbNO_3$
4. $Be(ClO_3)_2$
5. $Ca(MnO_4)_2$
6. HCH_3COO
7. NH_4HCO_3
8. $Ba(IO_3)_2$
9. $Mg(HSO_4)_2$
10. $Sr(NO_3)_2$
11. $LiHCO_3$
12. $KHSO_4$
13. $CsIO_3$
14. $NH_4H_2PO_4$
15. $RbOH$
16. $Be(CN)_2$
17. $Ca(NO_3)_2$
18. $KClO_3$
19. $CsCH_3COO$
20. $KHCO_3$

Creating Formulas for the Transition Metals

Name each of the following ionic compounds using Roman Numerals where necessary.

1. $ScCl_3$
2. $Cr(NO_3)_6$
3. MnO
4. $Fe(MnO_4)_2$
5. CoF_3
6. $Ni_3(PO_4)_2$
7. $CuCl_2$
8. ZnO
9. GeS_2
10. $AgCl$
11. PtO_2
12. Zn_3P_2
13. $Sn(HSO_4)_4$
14. Au_2O_3
15. $Bi_3(BO_3)_5$
16. NiN
17. TiO_2
18. VSO_4
19. $Cr(H_2PO_4)_3$
20. $W(MnO_4)_4$

Writing Formulas for Compounds with Transition Metals

Write the chemical formula for each of the following ionic compounds.

1. Chromium (II) sulphate
2. Manganese (IV) phosphide
3. Iron (III) sulphide
4. Cobalt (II) dichromate
5. Nickel (III) nitride
6. Copper (I) cyanide
7. Zinc carbonate
8. Cadmium phosphate
9. Mercury (II) iodide
10. Gold (III) permangante

Creating Formulas for Binary Molecular Compounds

Write the chemical formula for each of the following molecular compounds.

1. Carbon dioxide
2. Bromine monoxide
3. Iodine monochloride
4. Antimony trifluoride
5. Bromine dioxide
6. Carbon monosulphide
7. Phosphorus tribromide
8. Dinitrogen tetraoxide
9. Chlorine trifluoride
10. Phosphorus pentachloride
11. Bromine monofluoride
12. Dinitrogen pentoxide
13. Carbon tetraiodide
14. Tellurium dioxide

Naming Binary Molecular Compounds

Write the name for each of the following molecular compounds.

1. SiC
2. SiO_2
3. $SbBr_3$
4. IBr
5. $SiCl_4$
6. N_2O
7. CSe_2
8. CS_2
9. CO
10. BrF_5
11. $SbCl_3$
12. IF_5
13. SO_2