Key- Mr. Sudbury

Naming Covalent Compounds

Remember that covalent compounds contain nonmetals bonded with other nonmetals. A covalent compound can also be called a molecule. When naming molecules, you use a Greek prefix to indicate the number of each type of atom present in the compound. You also add an –ide to the end of the second element in the compound. You DO NOT need the mono-prefix before the first element. Also, you can alter the spelling to avoid putting two vowels together.
An example of this rule: CO = carbon monoxide, not carbon monooxide.

Greek Prefixes	
Mono - 1	Hexa – 6
Di – 2	Hepta – 7
Tri – 3	Octa – 8
Tetra – 4	Nona – 9
Penta – 5	Deca – 10

Example 1: CO = carbon monoxide **Example 2:** N2O dinitrogen monoxide

Name the following covalent compounds using IUPAC nomenclature rules.

81. Carbon monoxide CO
82. Carbon dioxide CO_2
83. Sulfur dioxide SO_2
84. Nitrogen dioxide NO_2
85. dinitrogen monoxide N_2O
86. Sulfur trioxide SO_3
87. Carbon tetrachloride CCl_4
88. Nitrogen monoxide NO
89. dinitrogen Pentoxide N_2O_5
90. diphosphorus pentoxide P_2O_5
91. dinitrogen tetroxide N_2O_4
92. carbon disulfide CS_2
93. Oxygen difluoride OF_2
94. Phosphorus trichloride PCl_3
95. Phosphorus pentachloride PCl_5
96. sulfur hexafluoride SCl_6
97. Silicon dioxide SiO_2
98. Phosphorus Pentabromide PBr_5
99. Nitrogen trihydride NH_3 AKA: Ammonia
100. dinitrogen trioxide N_2O_3
101. Phosphorus tribromide PBr_3
102. dichlorine heptoxide Cl_2O_7
103. Carbon tetrabromide CBr_4
104. Oxygen difluoride OF_2
105. silicon tetrachloride $SiCl_4$
106. Boron trifluoride BF_3
107. Silicon disulfide SiS_2
108. Silicon hexafluoride SiF_6
109. Arsenic Pentafluoride AsF_5
110. Selenium hexafluoride SeF_6
111. Tetraphosphorus trisulfide P_4S_3
112. Tetraphosphorus trisulfide P_4S_3

113. Selenium hexachloride $SeCl_6$

114. tetraphosphorus Pentasulfide P_4S_5

115. disilicon hexabromide Si_2Br_6

116. dihydrogen monoxide H_2O

117. diboron monosilicide B_2Si

118. nitrogen trifluoride NF_3

119. Iodine heptafluoride IF_7

120. Arsenic pentabromide $AsBr_5$

121. disulfur decafluoride S_2F_{10}

122. diboron tetrachloride B_2Cl_4

123. tetracarbon trisulfide C_4S_3

124. tetranitrogen decoxide N_4O_{10}

125. Chlorine dioxide ClO_2

126. Xenon difluoride XeF_2

127. Arsenic Pentachloride $AsCl_5$

128. Antimony tri chloride $SbCl_3$

129. Xenon trioxide XeO_3

130. Selenium tetrafluoride SeF_4

Write the formula for the named compound.

131. $SbBr_3$ Antimony tribromide

132. ClO_2 Chlorine dioxide

133. $SiCl_4$ Silicon tertrachloride

134. PF_5 Phosphorus pentafluoride

135. N_2Br_3 Dinitrigen tribromide