

Part I: Types of Compounds

1. Put a check in the box for the appropriate class/subclass for each of the following compounds. Use the flowchart in *figure 5.17* (and the back of these worksheets) to name the compound. The same figure can also be found at the back of this worksheet. Each subclass has its own rules for naming.

Chemical Formula	Ionic, Type I	Ionic, Type II	Molecular	Acid, Binary	Acid, Oxyacid	Compound Name
CCl ₄						
SnCl ₂						
HCl _(aq)						
SrCl ₂						
NH ₄ Cl						
H ₂ CO _{3(aq)}						
MgCO _{3(aq)}						
MnCO ₃						
CO ₂						
H ₂ S						
NaBr						

CHEM 4 PAL— Nomenclature Review

2. We can also use the flowchart to from name → formula. Provide the class/subclass and formula for each of the following compounds.

Chemical Name	Class/subclass	Compound Formula
Hydrosulfuric Acid		
Sulfuric Acid		
Sulfurous Acid		
Sulfur Dioxide		
Hydrophosphoric Acid		
Phosphoric Acid		
Phosphorous Acid		
Tin (IV) Sulfite		
Cesium Sulfate		
Silver Sulfide		
Nitrogen Dioxide		
Sulfur Tetroxide		
Hydroiodic Acid		

Part II: At Home Practice

You are likely expected to know the names, symbols, and formulae for at least 50 elements and ions. That's over 1000 possible compounds that can come from the combinations possible! This is impossible to memorize. Instead, focus on memorizing the required ions and elements. This exercise is one way that you can start to learn and understand the rules behind nomenclature of ionic compounds.

- For each ion write the name on one side of the ion and the symbol or formula on the other side.
- Make two piles of ions. One pile will be positively charged ions (cations) and the other will be negatively charged ions (anions).
- Shuffle both piles. Make sure all the cards are still facing the same direction (name up and symbol down or *vis versa*)
- Use the top card of each deck to randomly “create” an ionic compound. If the cards are name up, determine the formula of the compound. If the cards are symbol up, determine the name.
- Repeat until you've pulled all of the cards from one stack.
- Shuffle each deck and start over!

