

Answers to Naming Compounds Home Worksheet

This is here to help you understand the naming.

Formula:	Type of Compound:	Name:
1. NaCl	<i>Ionic</i>	1. sodium chloride
2. MgF ₂	<i>Ionic</i>	2. magnesium fluoride
3. K ₂ O	<i>Ionic</i>	3. potassium oxide
4. NaOH	<i>Polyatomic Ion</i>	4. sodium hydroxide
5. CaCO ₃	<i>Polyatomic Ion</i>	5. calcium carbonate
6. Ag ₂ SO ₄	<i>Transitional Polyatomic Ion</i>	6. silver sulfate
7. Ba(NO ₃) ₂	<i>Polyatomic Ion</i>	7. barium nitrate
8. Mg(NO ₂) ₂	<i>Polyatomic Ion</i>	8. magnesium nitrite
9. Zn(SO ₃) ₂	<i>Transitional Polyatomic Ion</i>	9. zinc sulfite
10. FeS	<i>Transitional Ion</i>	10. iron (II) sulfide
11. Cu ₃ N ₂	<i>Transitional Ion</i>	11. copper (II) nitride
12. Pb(CO ₃) ₂	<i>Polyatomic Ion</i>	12. lead (IV) carbonate

Remember there are exceptions to the naming that are discussed in your handout.

Specifically listed above are silver (Ag), Zinc (Zn), and lead (Pb).

The whole purpose of the Roman numerals is to indicate what charge the first element has. The Roman numerals will ALWAYS denote a positive charge and will ALWAYS be associated with the first element being listed, because in an ion, the first element is positive (cation) and the second element is negative (anion).

The silver and zinc are transitional metals that can only have one charge, which are Ag⁺ and Zn²⁺, so that it is not necessary to use a Roman numeral to show their charge.

Elements in the 3A to the 6A columns have the ability to have different charges depending on what it is combined with when it is the positive ion. Lead (Pb) is in 4A.

This means when lead is a positive ion (cation) it requires a Roman numeral to indicate what its charge is. That charge can be figured out by the charge of the negative ion (anion) that it is combined with.

The CO₃ has a -2 charge. There are two of them, so the overall charge is -4. The entire molecule's charge is to equal zero, so that means Pb has to have a +4 charge, thus (IV) is listed after lead to show it has a +4 charge.