

Formula Writing Review #4B

Dr. Slotsky

Write names for the following compounds

- 1) FeCl_2 _____
- 2) FeCl_3 _____
- 3) CuI _____
- 4) CuBr_2 _____
- 5) AuCl_3 _____
- 6) ZnF_2 _____
- 7) PbO_2 _____
- 8) PbO _____
- 9) CaO (trick here!) _____
- 10) HgO _____

EXAMPLE: Fe_2O_3 is Iron (III) Oxide

We recognize Fe as the symbol for Iron, and O as the symbol for Oxygen. Consulting our periodic tables, or pages 160-161 of our textbook, we can see that Oxygen forms the negative ion O^{-2} and therefore, in a compound, should be called **oxide**. We now know we will need to write “Iron” and “Oxide”.

As we can see from the periodic table or pages 160-161 of our textbook, Iron forms not one but **two** different ions, Fe^{+2} and Fe^{+3} . Which one is present in Fe_2O_3 ? Three O^{-2} ions have a total charge of **-6**. Two Fe^{+2} ions have a total charge of **+4**. These do not total zero: -6 and +4 do not equal **zero**. However, two Fe^{+3} ions have a total charge of **+6**, and the total of **+6** and **-6** is zero. All compounds have a total charge of **zero**. Therefore, Fe^{+3} is in Fe_2O_3 .

As iron has a **+3** charge in Fe_2O_3 , we call it Iron (**III**) Oxide.