

### **CONCEPT: WRITING FORMULAS OF COORDINATION COMPOUNDS**

- When writing formulas from names, follow 3 main rules.

(1) \_\_\_\_\_ is written before the \_\_\_\_\_.

(2) Transition metal is written before \_\_\_\_\_.

(3) Neutral ligands are written \_\_\_\_\_ anionic ligands, both in \_\_\_\_\_ order.

**EXAMPLE:** Provide a formula for Triaquadibromocarbonylmanganese(III) chlorite.

**STEP 1:** Identify cation and anion.

**STEP 2:** List formulas of metal, ligands, and counterion.

**STEP 3:** Write formula of complex ion and identify its \_\_\_\_\_.

a) Write transition metal before the ligands.

b) Write neutral ligands before anionic, both in alphabetical order.

**STEP 4:** Add counterion to the \_\_\_\_\_ of the brackets.

a) Write cation before the anion.

b) Balance charges.

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**PRACTICE:** Write a formula for following coordination compound: sodium tris(ethylenediamine)oxalatonicelate(I).

**PRACTICE:** What would be the formula for dibromotetracarbonylstannate(IV) sulfate.