

Shortcut for Formula Determination:

Use the following method when asked to determine the formula of an ionic compound:

1. Write the two ions with their charges (metal first).
2. Ignoring the + or – charges, “crisscross” the numbers and make them subscripts.
3. Then, rewrite the formula, dropping the charges.

(See Examples Below)

Example 1:

Write the formula for **calcium chloride**:

1. Write the two ions with their charges (metal first).



2. Ignoring the + or – charges, “crisscross” the numbers and make them subscripts:



3. Then, rewrite the formula, dropping the charges. In this case, the formula is: **CaCl₂**.
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Example 2:

Write the formula for **magnesium oxide**:

1. Write the two ions with their charges (metal first).



2. Ignoring the + or – charges, “crisscross” the numbers and make them subscripts:



3. Then, rewrite the formula, dropping the charges. The rewritten formula is: Mg₂O₂.

Note: Since the subscripts for the anion and cation are the same, the formula reduces to Mg₁O₁.

Therefore, the correct formula is written as: **MgO**.