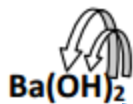


PARENTHESES

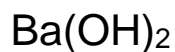
If elements or compounds are inside of **PARENTHESES**, then the **SUBSCRIPT** after the parentheses applies to everything inside.



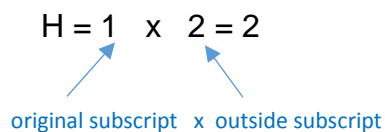
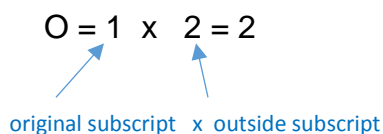
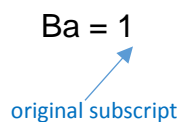
I call this number the outside subscript because it is **OUTSIDE** of the parentheses.

Let's take a look at barium hydroxide using what we already know about calculating atoms in a compound.

Step 1: Write the chemical formula.



Step 2: Separate the elements with their subscripts, parentheses, and coefficients.



Step 3: Add

$$1 + 2 + 2 = 5 \text{ atoms in one molecule of barium hydroxide}$$

NOTES:

Example 5: Boric acid

Step 1: B(OH)_3

Step 2: $\text{B} = 1$

$\text{O} = 1 \times 3 = 3$

$\text{H} = 1 \times 3 = 3$

Step 3: $1 + 3 + 3 = 7$ atoms in one molecule of boric acid

Example 6: Aluminum nitrate

Step 1: $\text{Al(NO}_3)_3$

Step 2: $\text{Al} = 1$

$\text{N} = 1 \times 3 = 3$

$\text{O} = 3 \times 3 = 9$

Step 3: $1 + 3 + 9 = 13$ atoms in one molecule of aluminum nitrate

Example 7: Acetone

Step 1: $(\text{CH}_3)_2\text{CO}$

Step 2: $\text{C} = 1 \times 2 = 2$

$\text{H} = 3 \times 2 = 6$

$\text{C} = 1$

$\text{O} = 1$

Step 3: $2 + 6 + 1 + 1 = 10$ atoms in one molecule of acetone

Example 8: Barium stearate

Step 1: $\text{Ba(C}_{18}\text{H}_{35}\text{O}_2)_2$

Step 2: $\text{Ba} = 1$

$\text{C} = 18 \times 2 = 36$

$\text{H} = 35 \times 2 = 70$

$\text{O} = 2 \times 2 = 4$

Step 3: $1 + 36 + 70 + 4 = 111$ atoms in one molecule of barium stearate

Practice Problems: Complete the nine practice problems in your notes. Yes, you must look up the chemical name. Yes, you must show me all THREE steps.

Calculate the number of atoms in each compound below. DO NOT squish your answer by each compound!

