

How to Count Atoms

Worksheet

1. The **symbol** of an element represents one atom of that element.
e.g., Ba =
2. A **subscript** is a number written at the **lower right** corner **behind the symbol** of an element. If there is more than one atom of the element, then a subscript is used to indicate the number of atoms.
e.g., Cl₂ =
3. A **subscript outside a bracket** multiples all the elements inside the brackets.
e.g., Ca₃(PO₄)₂ =

Ca = _____
P = _____
O = _____

3. A **coefficient** is a number written **in front of a chemical symbol** and indicates the number of atoms of that element or number of molecules
e.g., 3C = _____
2NaSO₄ = _____
A **subscript** is a number written **after an atom in a formula** and indicates the number of atoms of the kind in the molecule.
e.g. H₂SO₄ The subscript of H = 2 and the subscript of O = _____

Note: a coefficient multiples the number of atoms of each element in the formula

e.g.,

2 H₂O

_____ molecules of H₂O

_____ H (hydrogen)

_____ O (oxygen)

3 Na₂SO₄

_____ molecules of Na₂SO₄

_____ Na (copper)

_____ S (sulphur)

_____ O (oxygen)

4 Pb(NO₃)₂

_____ molecules of Pb(NO₃)₂

_____ Pb (Lead)

_____ N (nitrogen)

_____ O (oxygen)

Counting Atoms

Worksheet

Count the atoms present in the different compounds by using the coefficients and subscripts.



Type of Atom	# of Atoms
_____	_____
_____	_____
_____	_____
Total	_____



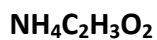
Type of Atom	# of Atoms
_____	_____
_____	_____
_____	_____
Total	_____



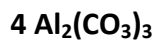
Type of Atom	# of Atoms
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_____	_____
_____	_____
Total	_____



Type of Atom	# of Atoms
_____	_____
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Total	_____



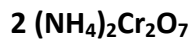
Type of Atom	# of Atoms
_____	_____
_____	_____
_____	_____
_____	_____
Total	_____



Type of Atom	# of Atoms
_____	_____
_____	_____
_____	_____
Total	_____



Type of Atoms	# of Atoms
_____	_____
_____	_____
_____	_____
Total	_____



Type of Atom	# of Atoms
_____	_____
_____	_____
_____	_____
_____	_____
Total	_____