

## Blackline Master 6.5a

# How To Count Atoms Review

1. The **symbol** of an element represents one atom of that element.

e.g., Ca = 1 atom of calcium

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 in the molecule, then a subscript is used to indicate the number of atoms.

e.g., N<sub>2</sub> = 2 atoms of nitrogen

3. A **subscript outside a bracket** multiplies all the elements inside the brackets.

e.g., Ba<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> =  
3 Ba  
2 P  
8 O

4. (a) A **coefficient** is a number written **in front of** a chemical symbol and indicates the number of atoms of that element.

e.g., 3C = 3 atoms of carbon /  
3 molecules of carbon

OR

(b) A **coefficient** is a number written **in front of** a chemical **formula** and indicates the number of molecules of that compound.

**NOTE:** A **coefficient** multiplies the number of atoms of each element in the formula.

e.g., 2H<sub>2</sub>O = 2 molecules of water  
4 H  
2 O

3FeSO<sub>4</sub> = 3 molecules of iron (II) sulfate  
3 Fe  
3 S

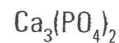
4Cu(NO<sub>3</sub>)<sub>2</sub> = 4 molecules of copper (II) nitrate  
4 Cu  
8 N  
24 O

## Blackline Master 6.5b

## Counting Atoms Worksheet



Type of Atom	# of Atoms
sodium	2
carbon	1
oxygen	3
Total	6



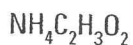
Type of Atom	# of Atoms
calcium	3
phosphorus	2
oxygen	8
Total	13



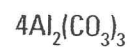
Type of Atom	# of Atoms
potassium	2
chromium	1
oxygen	4
Total	7



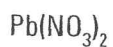
Type of Atom	# of Atoms
barium	3
chlorine	6
Total	9



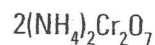
Type of Atom	# of Atoms
nitrogen	1
hydrogen	7
carbon	2
oxygen	2
Total	12



Type of Atom	# of Atoms
aluminum	8
carbon	12
oxygen	36
Total	56



Type of Atom	# of Atoms
lead	1
nitrogen	2
oxygen	6
Total	9



Type of Atom	# of Atoms
nitrogen	4
hydrogen	16
chromium	4
oxygen	14
Total	38