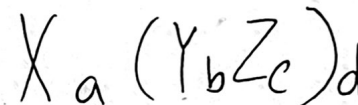
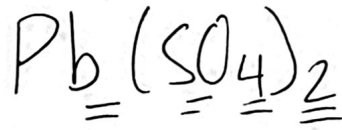
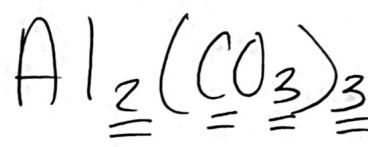
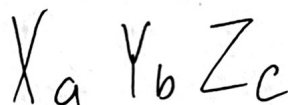
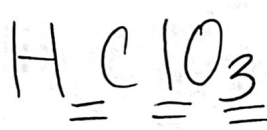
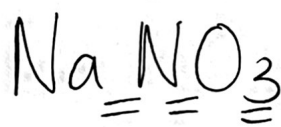
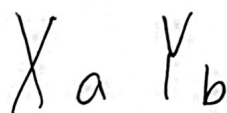
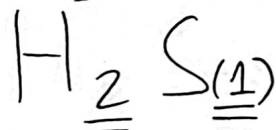
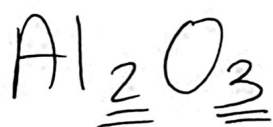


Noteset 6B (Part 2) - Breaking Down Molar Mass

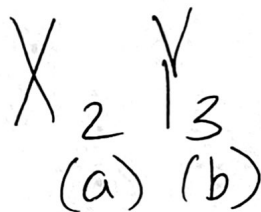
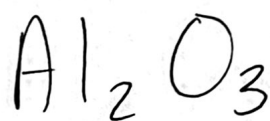
Ionic Compound / Covalent Molecule / Acid Forms

<u>Binary</u>	<u>Poly (1:1)</u>	<u>Poly (-: -)</u>
$X_a Y_b$	$X_a Y_b Z_c$	$X_a (Y_b Z_c)_d$

Examples

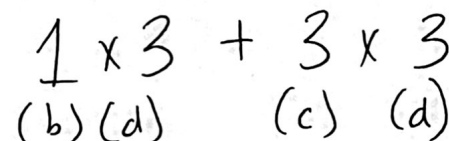
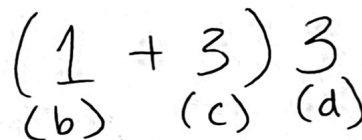
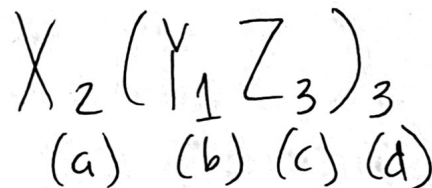
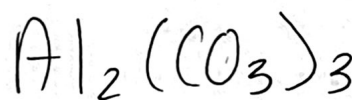


Identifying Subscripts (a, b, c, d)



$$a = 2 \quad b = 3$$

Finding subscripts
is required for
calculating Molar Mass



$$b = 3 \quad c = 9 \quad a = 2$$

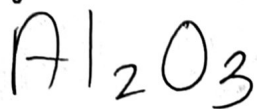
$$b = b \cdot d \quad c = c \cdot d$$

Binary Ionic Compound

Polyatomic Ion (-: -)

Identify Molar Masses (X, Y, Z)

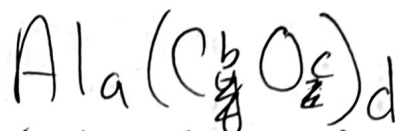
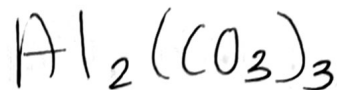
Binary Ionic Compound



(X) (Y)

$$X: MM_{Al} = 26.99 \text{ g/mol}$$

$$Y: MM_O = 16.00 \text{ g/mol}$$



(X) (Y) (Z)

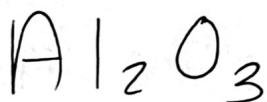
$$X: MM_{Al} = 26.99 \text{ g/mol}$$

$$Y: MM_C = 12.01 \text{ g/mol}$$

$$Z: MM_O = 16.00 \text{ g/mol}$$

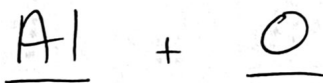
Polyatomic Ion (---)

Putting It Together ($X_a Y_b Z_c$)



$$X = a \cdot MM_X$$

$$Y = b \cdot MM_Y$$

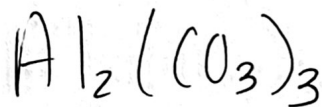


$$(2 \times 26.99 \text{ g}) + (3 \times 16.00 \text{ g})$$

$$53.98 \text{ g} + 48.00 \text{ g}$$

$$= 101.98 \text{ g/mol}$$

$$(MM_{Al_2O_3})$$



$$X = a \cdot MM_X$$

$$Y = b \cdot MM_Y$$

$$Z = c \cdot MM_Z$$



$$(2 \times 26.99 \text{ g}) = 53.98 \text{ g}$$



$$(3 \times 12.01 \text{ g}) = 36.03 \text{ g}$$



$$(9 \times 16.00 \text{ g}) = 144.00 \text{ g}$$

$$Al_2(CO_3)_3 = \underline{234.01 \text{ g/mol}}$$

Polyatomic Ion (---)