24

Expand out these compounds.

$3MgCl_2$ = $MgCl_2 + MgCl_2 + MgCl_2$

$4H_2$ = $H_2 + H_2 + H_2 + H_2$

$2Al_2O_3$ = $Al_2O_3 + Al_2O_3$

BeO = BeO

$5Li_2O$ = $Li_2O + Li_2O + Li_2O + Li_2O + Li_2O$

Write the following in reaction notation.

$3MgCl_2$ = Mg_3Cl_6 $2K_3N$ = K_6N_2

$4H_2$ = H_8 $6Ca$ = Ca_6

$2Al_2O_3$ = Al_4O_6 $8NaCl$ = Na_8Cl_8

BeO = BeO $7Fe_2O_3$ = $Fe_{14}O_{21}$

$5Li_2O$ = $Li_{10}O_5$ $2Ca(SO_4)$ = $Ca_2(SO_4)_2$

Why do we balance chemical reactions?

To follow the Law of Conservation of Matter

$Be + O_2 \rightarrow BeO$ (O)

Is this reaction balanced correctly? Why or why not?

No you cannot change the subscript

Write the coefficient to equal the correct number of atoms.

3 $Be_2Br = Be_6Br_3$

2 $O_2 = O_4$

4 $Li_3N = Li_{12}N_4$

3 $CO_2 = C_3O_6$

5 $NaCl = Na_5Cl_5$

6 $Al_2O_3 = Al_{12}O_{18}$

1 $BeI_2 = BeI_2$

8 $H_2O = H_{16}O_8$

4 $CO = C_4O_4$

2 $Mg_3N_2 = Mg_6N_4$

3 $Ca(CO_3) = Ca_3C_3O_9$

4 $Be(NO_3)_2 = Be_4N_8O_{24}$

Find the molecular masses of the following:

Al_2 = $27 + 27 = 54$ AMU

Li_3N = $7 + 7 + 7 + 14 = 35$ AMU

Mg_3N_2 = $24 + 24 + 24 + 14 + 14 = 100$ AMU

If 11 grams of Sodium Sulfate reacts with 17 grams of Barium Chloride and produces 19 grams of table salt.

how much $Ba(SO_4)$ is produced?

$Na_2(SO_4) + BaCl_2 \rightarrow Ba(SO_4) + 2NaCl$

(11g) (17g) (?g) (19g)

9g

Balance the following chemical reactions.
(Write reaction notation beneath the reactions to help yourself.)

2 ZnS + 3 $O_2 \rightarrow$ 2 ZnO + 2 SO_2 0-6

2 Be + ___ $O_2 \rightarrow$ 2 BeO

___ Fe_2O_3 + 3 $C \rightarrow$ 2 Fe + 3 CO

___ Li_2O + ___ $MgCl_2 \rightarrow$ 2 $LiCl$ + ___ MgO

___ $Na_2(SO_4)$ + ___ $BaCl_2 \rightarrow$ ___ $Ba(SO_4)$ + 2 $NaCl$