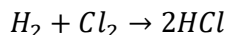


C11 - 2.1 - Conservation of Mass Balancing Equations Notes

Conservation of Mass: Mass can neither be created nor destroyed.

Reactants → Products

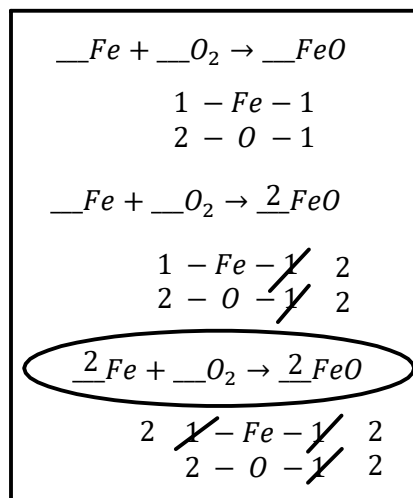
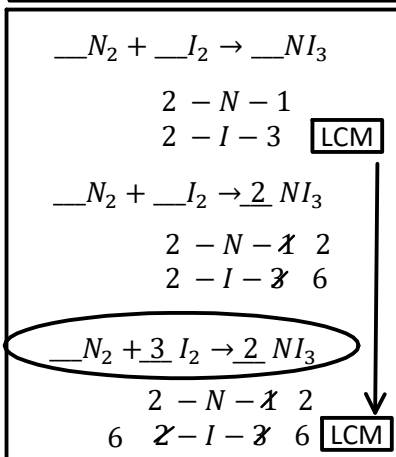
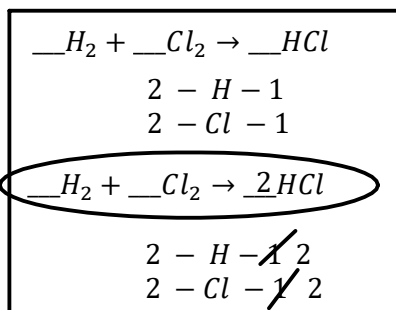
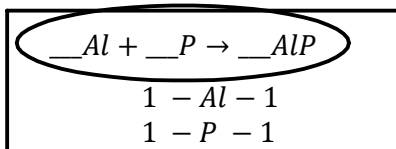


Reactants Mass

$$\begin{array}{r} 2 H \quad \quad 2 g \\ 2 Cl \quad \quad 71 g \\ \hline \text{Total Mass} = 73 g \end{array}$$

Products Mass

$$\begin{array}{r} 2 H \quad \quad 2 g \\ 2 Cl \quad \quad 71 g \\ \hline \text{Total Mass} = 73 g \end{array}$$



Steps:

1) Write :

- a) Reactants on Left (+)
- b) Blanks in front ____
- c) Arrow in between →
- d) Products on Right (+)

2) List

- a) Elements below arrow
- b) Dashes on both sides.

3) Write number of atoms/element

- a) On the left & right side of the dash.

4) Write

- a) Numbers in blanks
- b) Adjust numbers on both sides of the dash.

5) Repeat step 4 until equal # of atoms/element on both sides.

General Rules:

- 1) Complicated compounds first
- 2) Single/diatomic elements last.
- 3) Sometimes we need to use lowest common multiple (LCM) "concept".
- 4) Double Everything*
- 5) Watch out for even and odd numbers

