

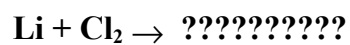
Predicting the Products of Chemical Reactions

- now that we know the reaction types (5)
- now that we know how to balance chemical equations

now comes the final task.....

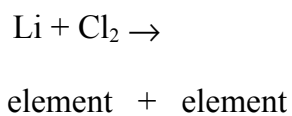
predicting our products (and THEN balancing)

ex:



- can u predict what kind of reaction will take place?
- can u predict the products?
- can u balance the equation?
- can u provide the states (s,l,g, aq)

First of all look at the reactants:



So what type of reaction can it only be?

Formation



What single compound is formed?

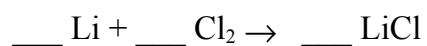
a combination of lithium and chlorine.....

lithium chloride

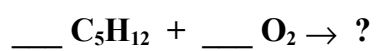
it must be ionic though (metal - nonmetal)

Li^+ and Cl^-

so LiCl



Now balance.

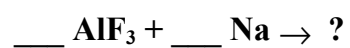


Look at the reactants.

What type of reaction is it?

What products are formed?

Balance the equation.



Look at the reactants.

What type of reaction is it?

What reactants are formed?

Balance the equation.

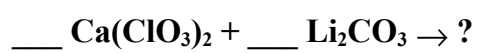


Look at the reactants.

What type of reaction is it?

What reactants are formed?

Balance the equation.



Look at the reactants.

What type of reaction is it?

What reactants are formed?

Balance the equation.



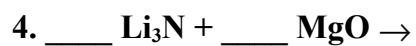
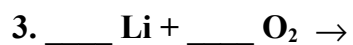
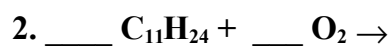
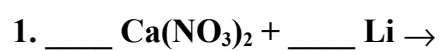
Look at the reactants.

What type of reaction is it?

What reactants are formed?

Balance the equation.

Try these...



Look at the reactants.

What type of reaction is it?

What reactants are formed?

Balance the equation.

We can also predict the products using word equations.

lithium pellets are reacted with sulfur pellets

a solution of copper II nitrate is reacted with a solution of lithium chloride

ex: calcium nitride powder is allowed to decompose

ex: the fuel pentane (C_5H_{12}) is burned in the presence of oxygen