



**Class XII
Chemistry**

Important Reactions used for Organic Chemistry Conversions

In CBSE board exam, usually word problems (conversions) covering "Properties and reactions of functional groups" carry a weightage of 5 marks. So, it is important that this particular type of questions is not left out while preparing for the exam.

Usually, students are confused about how to solve questions based on organic conversions.

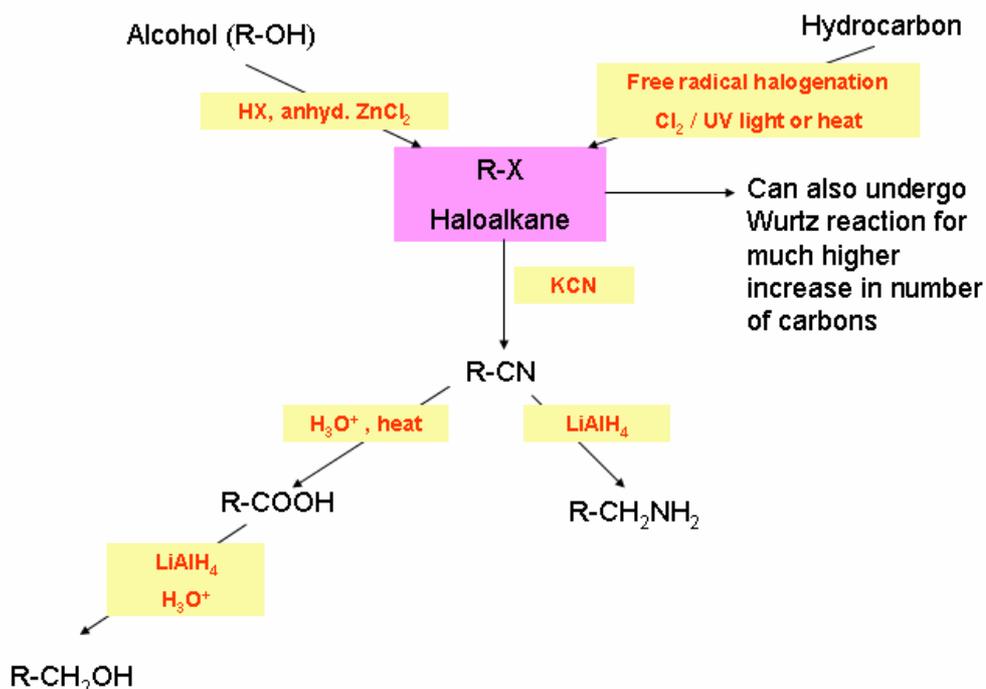
Here, below given are the conversions in small logical chunks which are easy to remember.

Broadly you can classify conversions into two types – aliphatic and aromatic.

1. Aliphatic conversions:

a. For stepping up the series:

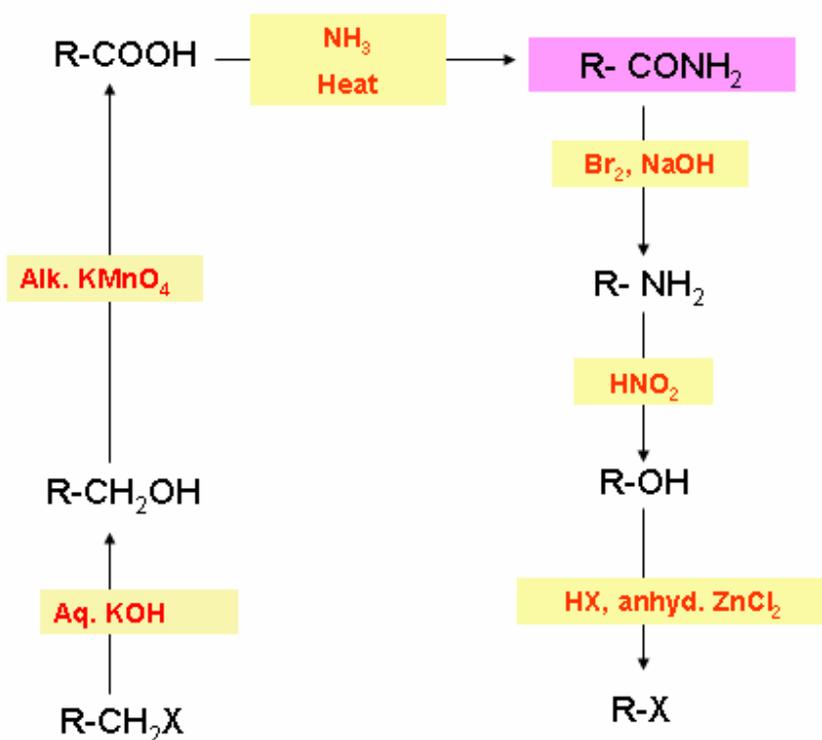
Stepping up the series means that the product has one carbon more than that of reactant. For such a kind of conversion, convert the given compound to an alkyl halide and then to a cyanide and then to the required organic compound as asked in the question. This way, the product has one carbon more than the reactant.





b. For stepping down of series:

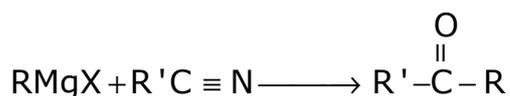
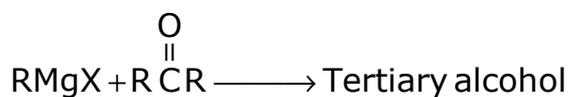
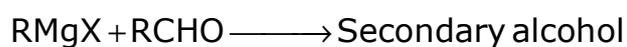
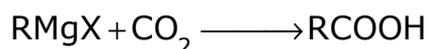
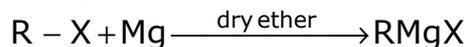
Stepping down the series means that the product has one carbon less than that of reactant. For such a kind of conversion, convert the given compound to an amide and then let it undergo Hoffmann bromamide degradation reaction. Then you convert it to the required product as asked in the question.





c. Reaction with Grignard's reagent:

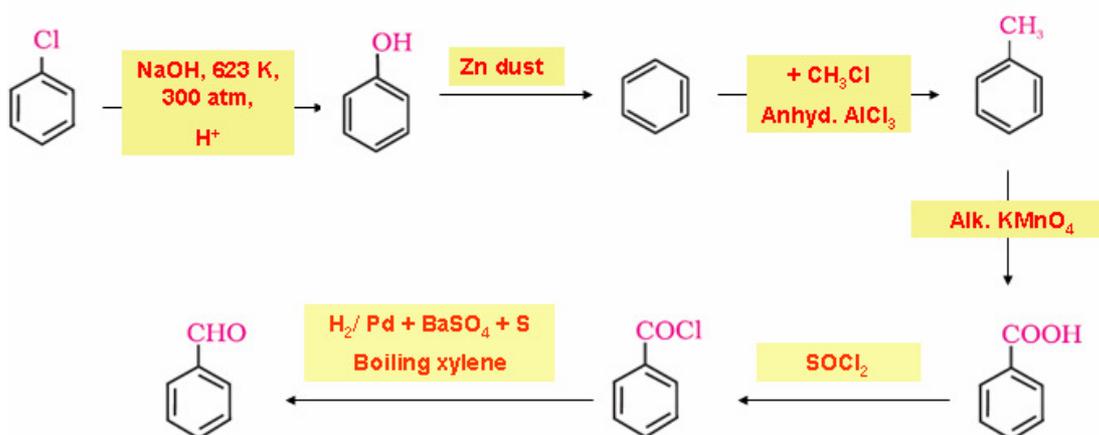
Grignard's reagent is a versatile reagent and can be used for many conversions. Some of its reactions are given below:



2. Aromatic conversions:

There are two types of conversions possible in this case:

a. When the functional group contains carbon atom:





b. When the functional group does not contain carbon atom:

