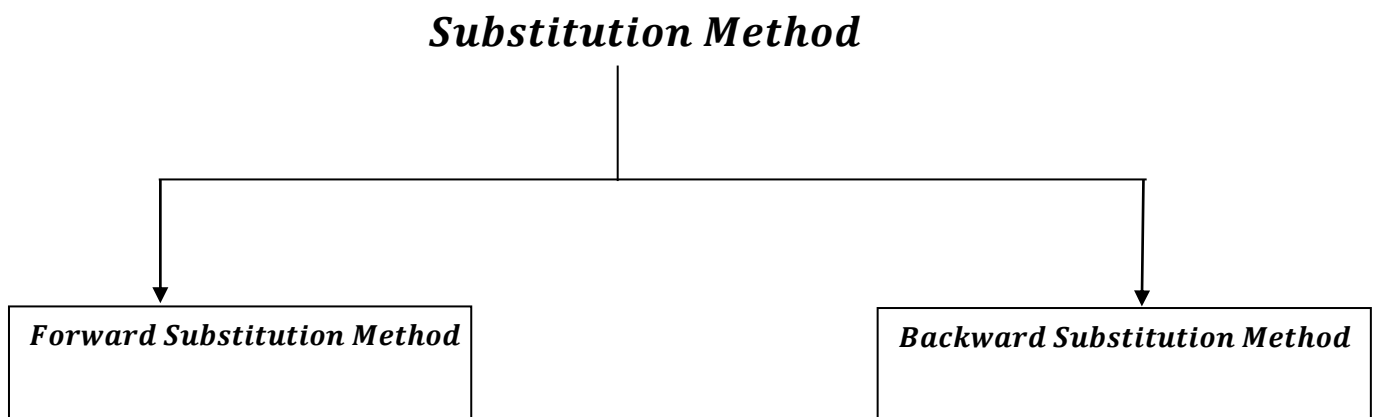


Substitution Method

The method of substitution is also called the iteration method.



The solutions of the Substitution method can be obtained by repeated substitution of the right – hand side of the recurrence equation till a pattern is obtained.

Forward Substitution Method: *If the solution is obtained by repeated substitution from base condition onwards, it is called forward substitution method.*

Backward Substitution Method: *If the substitution starts from the last term and proceeds to the initial term, it is known as the backward substitution or the back – tracking method.*

Both of the substitution methods involve two steps, which can informally be written as follows:

Plug : substitute repeatedly

Chug: simplify the expressions

Plug is simple. One has to keep substituting the recurrence equations repeatedly.

Chug is a step of simplifying the expressions.

Substitution methods may be followed by verification using mathematical induction.
