

Regula falsi method

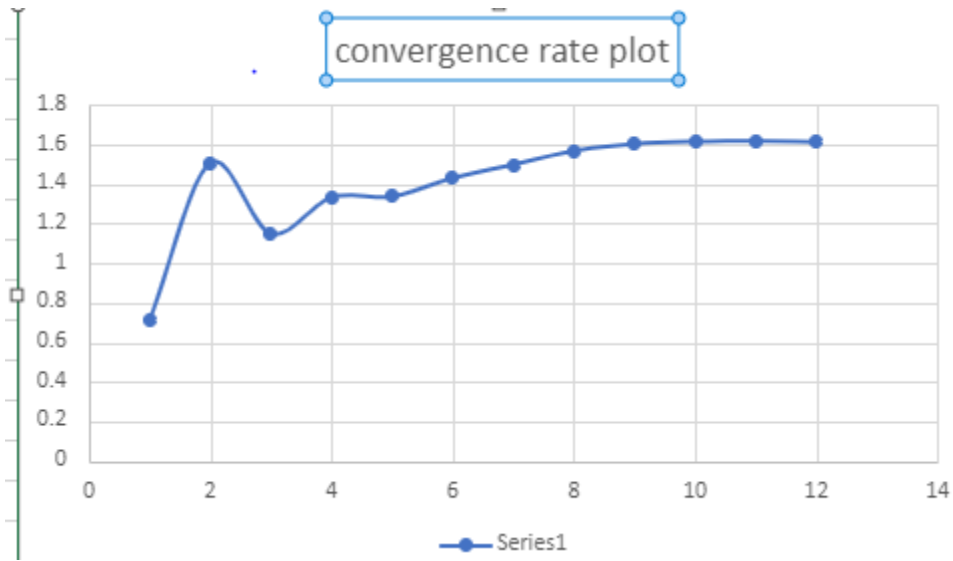
Algorithm

- Set the value of a and b;
- Checking condition $f(a)f(b)<0$;
- Then $x = (af(b)-bf(a))/(f(b)-f(a)$;
- Then checking condition if $f(x)f(b)<0$;
- Then set $a=x$;
- Else if $f(x)f(a)<0$;
- Set $b = x$;
- Then calculate x and repeat it ;

Secant method

Algorithm

- Set the value of $x[i-1]$ and $x[i]$;
- Set the value of t ;
- Check $f(x[i])f(x[i-1])<0$;
- Then $x[i+1] = x[i-1]f[x[i]]-x[i]f[x[i-1]]/f[x[i]]-f[x[i-1]]$;
- Repeat it till $x[i]-x[i-1]<t$ condition;



Newton's method

Algorithm

- Set the initial value $x[0]$;
- Set the initial value t ;
- $x[i+1] = x[i] - f[x[i]]/df[x[i]]$;
- Proceed the iteration till condition $x[i+1] - x[i] < t$ satisfy;

