COMPARISION BETWEEN

**BRACKETING METHOD AND OPEN ENDED METHOD**

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This is a simple report showing comparison between Bracketing Method and Open Ended method

**Bracketing methods:**

The Bracketing method is based on two initial guesses that brackets the root that they are on either side of the root.

**Open Ended Method:**

The open method involves one or more initial guesses, but there is no need for them to bracket the root. It requires only a single starting value or two starting values that do not necessarily bracket the root. As such, they some-times diverge or move away from the true root as the computation progresses .However, when the open methods converge they usually do so much more quickly than the bracketing methods.

The Basic Comparison between **Bracketing methods and Open Ended Method** are following:

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| **Comparison** | **Bracketing Method** | **Open Ended Method** |
| 1.Initial guess | Two initial guess | One initial guess |
| 2.Formula | Xr = ( Xa + Xb )/2 in domain[a,b].Shrink domain until root occurs  by checking f(a)f(b)<0 for  bisection method. | For Newton Rhapson Method:  X0 = a- f(a)f/(p)  if f(x0 ) = 0 then Xo is the root. |
| 3.Advantages | Always converges.  Approximate error can easily be computed. | Simple computation even using open hand calculator. |
| 4.Disadvances | Slow converging. | Faster converging. Converges when  f/(Xo) < 1. |