**False Position OR Regula-Falsi Method**

This is the oldest method for finding the real root of an equation and closely remember the bisection method.In this method, we choose two points x0 and x1 such that f(x0) & f(x1) are of opposite signs.Since the graphs of y=f(x) crosses the x-axis between these two points, a root must lie in between these points.

Now the equation of line joining the two points [x0,f(x0)] & [x1,f(x1)] is:-

y- y1 = ((y2 – y1) / (x2 – x1)) \* (x – x1)

y – f(x0) = ((f(x1) – f(x0)) / (x1 – x0)) \* (x – x0)

x = m , y = 0

-f(x0) = ((f(x1) – f(x0)) / (x1 –x0)) \* (m – x0)

(-f(x0) \* (x1 – x0)) / (f(x1) – f(x0)) = m – f(x0)

m = (x0f(x1) – x1f(x0)) / (f(x1) – f(x0))