**False-Position Method of Solving a Nonlinear Equation**

This method attempts to solve an equation of the form f(x)=0. (This is

very common in most numerical analysis applications.) Any equation can be

written in this form.

The algorithm requires a function f(x) and two points a and b for which

f(x) is positive for one of the values and negative for the other. We can write

this condition as f(a)f(b)<0.

If the function f(x) is continuous on the interval [a,b] with f(a)f(b)<0,

the algorithm will eventually converge to a solution.

The idea for the False position method is to connect the points (a,f(a)) and

(b,f(b)) with a straight line.

Since linear equations are the simplest equations to solve for find the regulafalsi

point (C) which is the solution to the linear equation connecting the

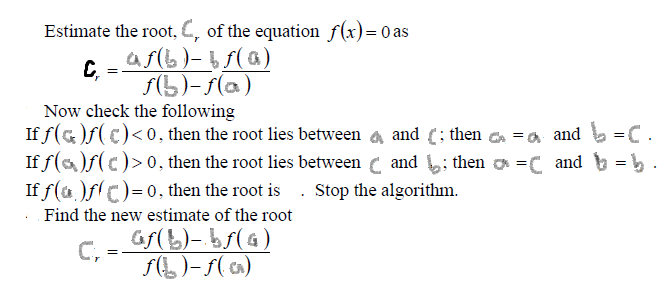
endpoints.

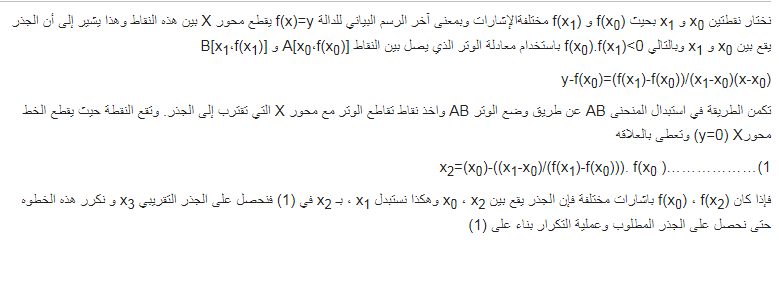
Look at the sign of f(C):

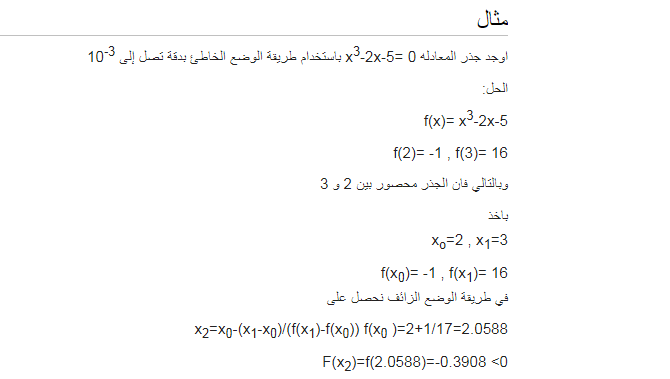
If sign (f(C)) = 0 then end algorithm

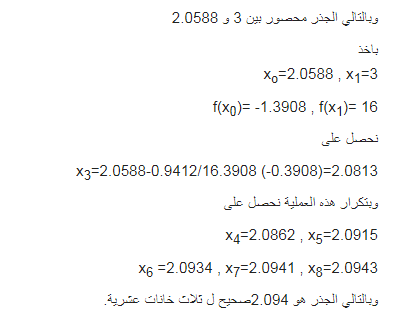
else If sign(f(C)) = sign(f(a)) then set a = C

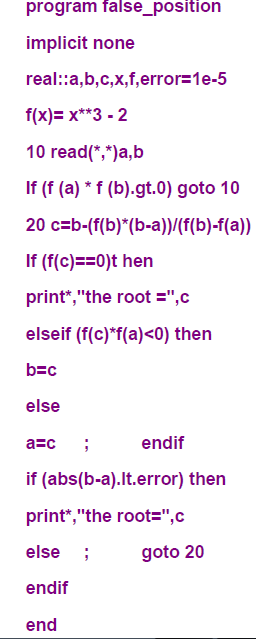
else set b = C



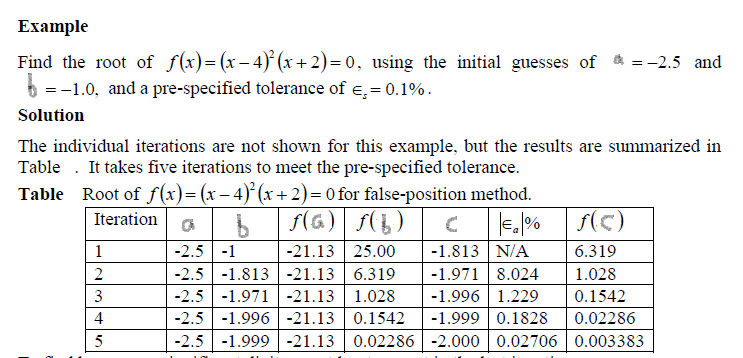








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**المصادر**

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