Bisection Method

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Symbols used

a, b -> Initial approximation between which root lies

e -> Allowed error

x-> New approximation of the root in each iteration

n -> Number of iterations performed

Algorithm

1. START
2. Define function(x) and allowed error(e)

1. Input initial values for a and b

1. Calculate f(a) and f(b)
2. if f(a)f(b) > 0, print “Initial approximations are incorrect”, go to (3)
3. else, continue
4. Set n=0

1. Perform (7) and (8) while |t-x| > e and f(x) != 0

1. Compute x = (a+b)/2 and f(x)
2. if f(b)f(x) < 0, set a = x
3. else, set b = x
4. Increment n by 1
5. Print “Approximate root of the function is:”, x

1. STOP