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/*
This is a program to find out the root of a function f = exp (x) * log (x) - x * x using Secant Method.
This program is created by Mohammad Sazzad Hossain.
*/


   # include <iostream>
   # include <math.h>

      using namespace std;

      double f (double x){return (exp (x) * log (x) - x * x);}
      int initial ();
      double secant (double x);

      int main (){
      cout << secant (initial());

   return 0;
   }
      double secant (double x){
      double dl = 1E-6, funct; //Error
      int tag = 0;

   do {
      funct = x + dl * f(x) / (f(x) - f(x - dl));
      if (x + dl < funct && x + dl > -funct)
         tag = 1;
         x += dl;
   }while (tag != 1);

   return x;
   }

      int initial (){
      int a = 0, x = 0, tag = 0;

   do {
      if (f(x) > 0){
         a = x;
         x++;
   }
   else
      tag = 1;
```

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    }while (tag != 1);

    return (x);
    }
```