//program for secan't method

#include<iostream> //for cout & cin

#include<math.h> //for trigonometric functions if any

using namespace std;

#define f(x) ( x\*x\*x-x-11 ) //input function

void ab(double \*a,double \*b,double x) //for finding interval

{ while(1)

{ if(f(x)<0)

{ while(f(x)<0.0)

x++;

\*b=x--;

\*a=x;

break;

}

else

{ while(f(x)>0.0)

x++;

\*b=x--;

\*a=x;

break;

}

}

cout<<"\n A="<<\*a<<" B="<<\*b;

}

void root(double \*a,double \*b,double x) //for finding root

{ double k;

for(int i=0;i<15;i++)

{ k=x;

x=(\*b-(f(\*b)\*(\*b-\*a)/(f(\*b)-f(\*a))));

\*a=\*b;

\*b=x;

if(k==x)

break;

cout<<"\n X"<<i+1<<" = "<<x;

}

}

int main()

{ double a,b,x=0.0;

ab(&a,&b,x);

root(&a,&b,x);

return 0;

}

