#include<stdio.h>

#include<conio.h>

#include<math.h>

#define f(x,y) ((y\*y) - (y/x))

int main()

{

int i,n;

float x0,y0,y1,y1\_0,h,x1,xn;

printf("Enter the value of x0 and xn and y0\n");

scanf("%f %f %f", &x0,&xn,&y0);

printf("Enter the incremental value\n");

scanf("%f", &h);

n=(xn-x0)/h;

for(i=0;i<n;i++)

{

y1\_0=y0+h\*f(x0,y0);

x1=x0+h;

y1=y0+h\*(f(x0,y0)+f(x1,y1\_0))/2;

while(fabs(y1\_0-y1)>=0.0001)

{

y1\_0=y1;

y1=y0+h\*(f(x0,y0)+f(x1,y1\_0))/2;

}

x0=x1;

y0=y1;

}

printf("The value of y at x = %f is y = %f\n",x0,y0);

}

//output

//Enter the value of x0 and xn and y0

//1

//1.6

//1

//Enter the incremental value

//0.2

//The value of y at x = 1.600000 is y = 1.181666