#define M\_PI 3.14159265358979323846

#include <iostream>

#include <math.h>

using namespace std;

double Kafka(double x0, double x1, double e);

double Function(double x);

int main()

{

setlocale(LC\_ALL, "rus");

cout << "Функция: ln(x)-5\*cos(x)" << endl;

double a = 1, b = 8, h = 1, x, xstr, y, eps;

cout << "Введите eps: ";

cin >> eps;

for (x = a; x < b; x += h)

{

if (Function(x)\*Function(x + h) < 0)

{

xstr = Kafka(x, x + h, eps);

y = Function(xstr);

printf("x = %3.5lf ", xstr);

printf("y = %1.10lf", y);

cout << endl;

}

}

system("pause");

return 0;

}

double Kafka(double x0, double x1, double e)

{

double x, t;

while (fabs(x1 - x0) > e)

{

t = x1;

x1 = x1 - (x1 - x0)\*Function(x1) / (Function(x1) - Function(x0));

x0 = t;

}

return x1;

}

double Function(double x)

{

double y;

y = log(x) - 5 \* cos(x);

return y;

}