ABC Systems, [15.11.20 16:49]

nclude <iostream>

#include <math.h>

using namespace std;

#define EPS 1e-11

#define PI acos(-1.0)

double sqr(double x) { return x\*x; }

int i, n;

double fi, Left, Right, Middle;

int main() {

scanf("%d", &n);

Left = n / 2; Right = n \* n;

while (fabs(Right - Left) > EPS)

{

Middle = (Left + Right) / 2;

for (fi = 0, i = 1; i <= n; i++)

{

double angle = (2 \* sqr(Middle) - sqr(i)) / (2 \* sqr(Middle));

if (angle < -1.0 || angle > 1.0)

{

fi = 100;

break;

}

fi += acos(angle);

}

if (fi > 2 \* PI) Left = Middle;

else Right = Middle;

}

printf("%.8lf\n", Left);

return 0;

}