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Код программы:

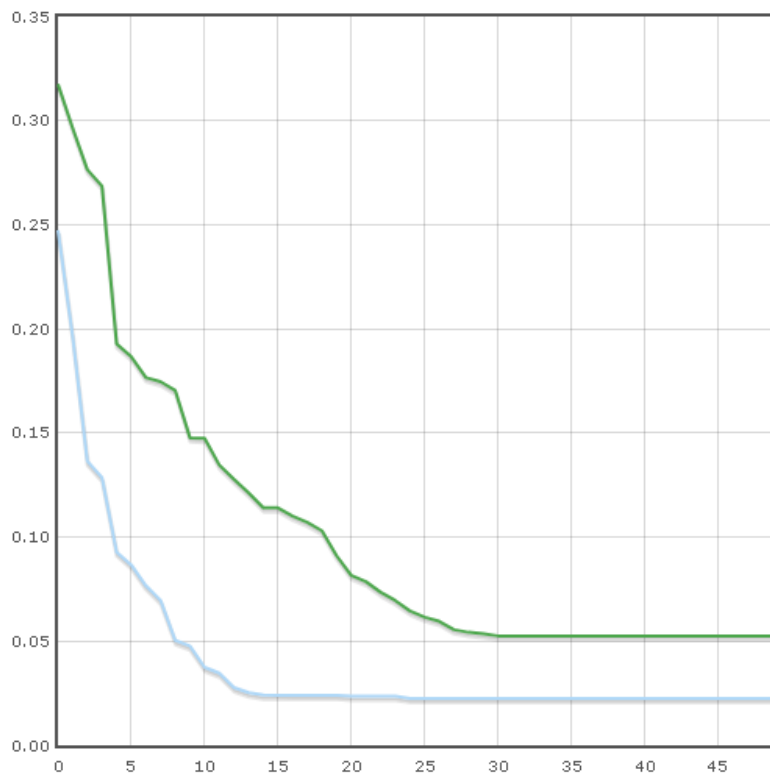
```
#include <QCoreApplication>
#include<qDebug>
#include "chromosome.h"

using namespace std;
int main(int argc, char *argv[])
{
    QCoreApplication a(argc, argv);
    QVector<Chromosome> population(20);
    QVector<Chromosome> children(2);
    for(int i=0;i<20;i++){
        population[i].Around();
        population[i].Convert_to_binary();
    }
    for(int i=0;i<100;i++){
        int first =rand() % 20;
        int second =rand() % 20;
        for(int i=0;i<4;i++){
            children[1].chromosomes.second[i]=population[first].chromosomes.second[i];
            children[0].chromosomes.second[i]
            =population[second].chromosomes.second[i];
        }

        if(children[0].F1()<=population[first].F1()&&children[0].F2()<=population[first].F2()){
            population[first] = children[0];
        }
        population[first].Convert_to_float();

        if(children[1].F1()<=population[second].F1()&&children[1].F2()<=population[second].F2()){
            population[second] = children[1];
        }
        population[second].Convert_to_float();
    }
    return a.exec();
}
```

Green line -fitness function $(x-0.4)^2$;
Blue line – fitness function $(x-0.6)^2$;
Fitness



Generation

