```cpp
#include<iostream>
#include<cmath>
#include<fstream>
#include<cstdlib>
#include<ctime>
using namespace std;

double dt = 0.25;

double f1(int N, double lambda)
{
    double x, m=0;

    for(int i=0; i<=N; i++)
    {
        x=(double)rand()/(double)RAND_MAX;
        if(x<=lambda*dt)
        {
            m+=1;
        }
    }

    return m;
}

int main()
{
    ofstream fout("test17.dat");
    int N1=100000, N2=50000, N3=50000;

    for(double t=0; t<=500; t+=dt)
    {
        fout << t << "   " << N1 << "   " << N2 << "   " << N3 << "   " << log(N1) << "   " <<
        log(f1(N1, 0.08)) << endl;

        N1 -= f1(N1,0.08);
        N2 -= f1(N2, 0.08);
        N3 -= f1(N3, 0.05);
    }

    return 0;
}
```