**Additional material 3**

#include <fstream>

#include <iomanip>

#include <cmath>

#define g 9.8

#define kOverM 1

#define deltaT 0.05

#define eps 0.17

using namespace std;

ofstream fout("date.out");

int main()

{ long double v=0,t=0,y=0;

long double a=-g-kOverM\*v;

while (abs(a)>eps)

{

t+=deltaT;

y+=deltaT\*v;

v+=deltaT\*a;

a=-g-kOverM\*v;

fout<<setw(6)<<t<<setw(25)<<y<<setw(12)<<v<<setw(12)<<a<<endl;

}

return 0;

}