#include <stdio.h>

#include <stdlib.h>

#define k1 0.008

#define k2 0.002

float chem1(float c1, float c2, float c3, float t){

return(c1+(k2\*c3-k1\*c1\*c2)\*t);

}

float chem2(float c1, float c2, float c3, float t){

return(c2+(k2\*c3-k1\*c1\*c2)\*t);

}

float chem3(float c1, float c2, float c3, float t){

return(c3+(2\*k1\*c1\*c2-2\*k2\*c3)\*t);

}

int main(){

FILE \*fp;

fp= fopen("lab1.csv","w");

float c1=25, c2=50, c3=0, t=0, temp\_c1, temp\_c2, temp\_c3;

do{

temp\_c1=chem1(c1,c2,c3,t);

temp\_c2=chem2(c1,c2,c3,t);

temp\_c3=chem3(c1,c2,c3,t);

fprintf(fp,"%f\t",t);

fprintf(fp,"%f\t",temp\_c1);

fprintf(fp,"%f\t",temp\_c2);

fprintf(fp,"%f\n",temp\_c3);

c1=temp\_c1;

c2=temp\_c2;

c3=temp\_c3;

t+=0.25;

}while(t<10);

fclose(fp);

return 0;}