2

#include <iostream>

using namespace std;

int main()

{

int x1=-2,x2=0,x3=2,y1=-3,y2=2,y3=-3,x0,y0;

cin>>x0;

cin>>y0;

if((x1-x0)\*(y2-y1)-(x2-x1)\*(y1-y0)==0 or

(x2-x0)\*(y3-y2)-(x3-x2)\*(y2-y0)==0 or

(x3-x0)\*(y1-y3)-(x1-x3)\*(y3-y0)==0){

cout<<"yes"<<endl;

}

if((x1-x0)\*(y2-y1)-(x2-x1)\*(y1-y0)>0 and

(x2-x0)\*(y3-y2)-(x3-x2)\*(y2-y0)>0 and

(x3-x0)\*(y1-y3)-(x1-x3)\*(y3-y0)>0){

cout<<"+"<<endl;

}

if((x1-x0)\*(y2-y1)-(x2-x1)\*(y1-y0)<0 and

(x2-x0)\*(y3-y2)-(x3-x2)\*(y2-y0)<0 and

(x3-x0)\*(y1-y3)-(x1-x3)\*(y3-y0)<0){

cout<<"-"<<endl;

}

int p1=(x1-x0)\*(y2-y1)-(x2-x1)\*(y1-y0);

int p2=(x2-x0)\*(y3-y2)-(x3-x2)\*(y2-y0);

int p3=(x3-x0)\*(y1-y3)-(x1-x3)\*(y3-y0);

cout<<p1<<endl<<p2<<endl<<p3;

return 0;

}

7

x-xa y-ya

------- =-------------

xb-xa yb-ya

8

int main()

{

double a,b,k,m;

float x,y;

cin>>a;

cin>>b;

cin>>k;

cin>>m;

if (a==k){

cout<<"no";

}

else{

x=(m-b)/(a-k);

y=(k\*b-a\*m)/(k-a);

cout<<endl<<x<<endl<<y;

}

}

9

#include <iostream>

#include <cmath>

int main()

{

std::cout<<"Enter center circle(x,y) ";

double x0,y0;

std::cin>>x0>>y0;

std::cout<<"Enter radius circle";

double R0;

std::cin>>R0;

std::cout<<"Enter coordinate of point ";

double x1,y1;

std::cin>>x1>>y1;

double d = sqrt((x0-x1)\*(x0-x1)+(y0-y1)\*(y0-y1));

if(d<R0)

std::cout<<"Inside circle\n";

else if(d>R0)

std::cout<<"Outside circle\n";

else

std::cout<<"On circle\n";

return 0;

}

10

**import** numpy **as** np

x0, y0, R0 = 3, 3, 5 *# координаты центра окружности и радиус*

**if** R0\*R0-y0\*y0 >= 0:

    x1 = -1 \* np.sqrt(R0\*R0-y0\*y0)+x0

    x2 = np.sqrt(R0\*R0-y0\*y0)+x0

**print**('Точки пересечения: x1 = ', x1,' x2 = ', x2)

**else**:

**print**('Окружность не пересекается с осью абсцисс')

11