1. **Write a program to implement Bresenham’s line drawing algorithm.**

#include<iostream>

#include<graphics.h>

#include<conio.h>

using namespace std;

void drawline(int x0, int y0, int x1, int y1)

{

int dx,dy,pk,xk,yk;

dx=x1-x0;

dy=y1-y0;

xk=x0;

yk=y0;

pk=2\*dy-dx;

while(xk<x1)

{

if(pk>=0)

{

putpixel(xk,yk,7);

yk=yk+1;

pk=pk+2\*dy-2\*dx;

}

else

{

putpixel(xk,yk,7);

pk=pk+2\*dy;

}

xk=xk+1;

cout<<"("<<xk<<","<<yk<<")"<<" and pk is "<<pk<<endl;

}

}

int main()

{

int x0, y0, x1, y1;

initwindow(800,800);

cout<<"Enter co-ordinates of first point:"<<endl;

cin>>x0;

cin>>y0;

cout<<"Enter co-ordinates of second point:"<<endl;

cin>>x1;

cin>>y1;

drawline(x0, y0, x1, y1);

getch();

return 0;

}

**OUTPUT:**