#include<stdio.h> #include<conio.h> #include<graphics.h> #include<math.h> void main() { int a[4],b[4]; float m,xnew,ynew; float x1=100,y1=100,xh=300,yh=300,xa=10,ya=200,xb=250,yb=150; int gd=DETECT,gm; initgraph(&gd,&gm,"c:\\turboc3\\bgi"); setcolor(9); line(xa,ya,xb,yb); setcolor(11) ; rectangle(x1,y1,xh,yh); m=(yb-ya)/(xb-yb);

if (xa<x1) a[3]=1; else a[3]=0;

if (xa>xh) a[2]=1; else a[2]=0;

if (ya<y1) a[1]=1; else a[1]=0;

if (ya>yh) a[0]=1; else a[1]=0;

if (xb<x1) b[3]=1; else b[3]=0;

if(xb>xh) b[2]=1; else b[2]=0;

if(yb<y1) b[1]=1; else b[1]=0;

if(yb>yh) b[0]=1; else b[0]=0;

printf("press a key to continue.") ; getch(); if(a[0]==0 && a[1]==0 && a[2]==0 && a[3]==0 && b[0]==0 && b[1]==0 && b[2]==0 && b[3]==0 ) { printf("\nNO CLIPPING!"); line(xa,ya,xb,yb); }

else if(a[0]&&b[0] || a[1]&&b[1] || a[2]&&b[2] || a[3]&&b[3]) { clrscr(); printf("LINE DISCARDED"); rectangle(x1,y1,xh,yh); }

else { if(a[3]==1 && b[3]==0) { ynew=(m\*(x1-xa))+ya; setcolor(11); rectangle(x1,y1,xh,yh); setcolor(0); line(xa,ya,xb,yb); setcolor(15); line(x1,ynew,xb,yb); } else if(a[2]==1 && b[2]==0) { ynew=(m\*(xh-xa))+ya; setcolor(11); rectangle(x1,y1,xh,yh); setcolor(0); line(xa,ya,xb,yb); setcolor(15); line(x1,ynew,xb,yb); } else if(a[1]==1 && b[1]==0) { xnew=xa+(y1-ya)/m; setcolor(0); line(xa,ya,xb,yb); setcolor(15) ; line(xnew,yh,xb,yb); } else if(a[0]==1 && b[0]==0) { xnew=xa+(yh-ya)/m; setcolor(0); line(xa,ya,xb,yb); setcolor(15); line(xnew,yh,xb,yb); } } getch(); closegraph(); }

**BEFORE CLIPPING AFTER CLIPPING**

