```c
#include<stdio.h>
#include<graphics.h>
int main()
{
        long x,y,x_center,y_center;
        long a_sqr,b_sqr,fx,fy,d,a,b,tmp1,tmp2;
        int g_driver=DETECT,g_mode;

        initgraph(&g_driver,&g_mode,"");
        printf("*MID POINT ELLIPSE*");
        printf("\n Enter coordinate x = ");
        scanf("%ld",&x_center);
        printf(" Enter coordinate y = ");
        scanf("%ld",&y_center);
        printf("\n Now Enter constants a =");
        scanf("%ld",&a,&b);
        printf(" Now Enter constants b =");
        scanf("%ld",&b);
        x=0;
        y=b;
        a_sqr=a*a;
        b_sqr=b*b;
        fx=2*b_sqr*x;
        fy=2*a_sqr*y;
        d=b_sqr-(a_sqr*b) + (a_sqr*0.25);
        do
        {
                putpixel(x_center+x,y_center+y,1);
                putpixel(x_center-x,y_center-y,1);
                putpixel(x_center+x,y_center-y,1);
                putpixel(x_center-x,y_center+y,1);
```

```
if(d<0)
{
        d=d+fx+b_sqr;
}
else
{
        y=y-1;
        d=d+fx+-fy+b_sqr;
        fy=fy-(2*a_sqr);
}
x=x+1;
fx=fx+(2*b_sqr);
delay(10);
}
while(fx<fy);
tmp1=(x+0.5)*(x+0.5);
tmp2=(y-1)*(y-1);
d=b_sqr*tmp1+a_sqr*tmp2-(a_sqr*b_sqr);

do
{
        putpixel(x_center+x,y_center+y,1);
        putpixel(x_center-x,y_center-y,1);
        putpixel(x_center+x,y_center-y,1);
        putpixel(x_center-x,y_center+y,1);

        if(d>=0)
        d=d-fy+a_sqr;
        else
        {
```

```
            x=x+1;

            d=d+fx-fy+a_sqr;

            fx=fx+(2*b_sqr);

        }

        y=y-1;

        fy=fy-(2*a_sqr);

    }

    while (y>0);

    getch();

    closegraph();

}
```



```
*MID POINT ELLIPSE*
 Enter coordinate x = 200
 Enter coordinate y = 150

 Now Enter constants a =100
 Now Enter constants b =50
```