```
#include <stdlib.h>
#include <graphics.h>
#define ROUND(a) ((int)(a+0.5))

void ellipseplotpoint(int, int, int, int);
void ellipsemidpoint(int, int, int, int);

void ellipsemidpoint(int xc, int yc, int rx, int ry)
{
        int rx2=rx*rx, ry2=ry*ry;
        int tworx2=2*rx2, twory2=2*ry2;
        int p,x=0,y=ry;
        int px=0,py=tworx2*y;

        ellipseplotpoint(xc,yc,x,y);
        p=ROUND( ry2-(rx2*ry)+(0.25*rx2));

        while(px<py)
        {
                x++;
                px+=twory2;
                if(p<0)
                        p+=ry2+px;
                else
                {
                        y--;
                        py-=twory2;
                        p+=ry2+px-py;
                }
                ellipseplotpoint(xc,yc,x,y);
        }

        p= ROUND( ry2*(x+0.5)*(x+0.5)+rx2*(y-1)*(y-1)-rx2*ry2 );

        while(y>0)
        {
                y--;
                py-=tworx2;
                if(p>0)
                        p+=rx2-py;
                else
                {
                        x++;
                        px+=twory2;
                        p+=rx2-py+px;
                }
                ellipseplotpoint(xc,yc,x,y);
        }
}

void ellipseplotpoint(int xc, int yc, int x, int y)
{
        putpixel(xc+x, yc+y, WHITE);
        putpixel(xc-x, yc+y, WHITE);
        putpixel(xc+x, yc-y, WHITE);
        putpixel(xc-x, yc-y, WHITE);
}

int main(int argc, char * argv[])
{
        initwindow(400,400,"window");

        ellipsemidpoint(100,100,80,50);
        ellipsemidpoint(100,80,40,20);

        //tyres
        ellipsemidpoint(25,130,30,30);
        ellipsemidpoint(175,130,30,30);
```

```
        while(!kbhit())
                delay(50);

        return EXIT_SUCCESS;
}
```