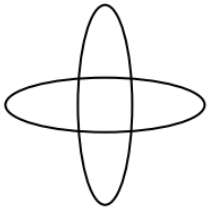


## Assignment 6

1. Write a program to draw the following figure:-



Input is  $r_x$ ,  $r_y$  and center coordinates.

(Use the concept of Mid Point Ellipse generating algorithm)

2. Write a menu driven Program to implement set of basic Transformations on Polygon:  
Program should include: Translation, Rotation and Scaling.
3. Write a menu driven program to implement set of Composite Transformations on Polygon:  
Program should include: Translation, Rotation (about arbitrary point, arbitrary axis, and arbitrary plane), Scaling (fixed point), and Shearing (X & Y), Reflection (along X axis, along y axis, along the origin and along  $Y=X$  line).
4. Write a program to draw the following structure:



5. Write a program to continuously rotate an object about a pivot point.  
Hint: Small angles are to be used for each successive rotation, and approximations to the sine and cosine functions are to be used to speed up the calculations.  
The rotation angle for each step is to be chosen so that the object makes one complete revolution in less than 30 seconds.  
To avoid accumulation of coordinate errors, reset the original coordinate values for the object at the start of each new revolution.