Part 3)

1. The rotation around the z-axis was just a rotation around the center of the letter using cosine and sine. This rotation will be a linear rotation. In order to rotate, we used the following rotation matrix:

R =
\begin{bmatrix}
\cos \theta & -\sin \theta \\
\sin \theta & \cos \theta \\
\end{bmatrix}


We multiplied R times the coordinates of our vertices.

The rotations around the y-axis and x-axis will include a scaling component. The scalar will act as the rotation, however, the scalar appear to be a nonlinear equation. The equation will act more like an exponential equation because you will be multiplying by a factor after each update.