ISS1 Lecture 3: Translation and Rotation in 2D and 3D

1. Use scale() and translate() to draw a circle that grows and shrinks according to a sine function and whose centre moves in a circular orbit around the centre of the display area.
2. Modify the sketch you created in question 1 so that it works in 3D with a sphere rotating around the y-axis
3. Write a sketch that draws a random closed 2D vertex shape and slightly changes its shape on every frame so that it looks like an amoeba. Make the ameoba slowly move around the display area.
4. Draw a regular octahedron in 3D (of course!) and allow the user to view the object from any angle by moving the mouse around the display. (See the RotatePyramid sketch for hints.)
5. Modify the rotating octahedron sketch in Question 4 so that the user can also zoom in and out on the object.
6. Modify the simple solar system program so that it is object-oriented. Add representations of all the planets and moons in the solar system.
7. Convert the solar system sketch to 3D so that it has rotating spheres rather than circles.