1) Write down how to test if a 2D point \((x, y)\) is inside the triangle with vertices \((x_0, y_0)\), \((x_1, y_1)\), and \((x_2, y_2)\).

2) Give an explicit description of the circle with centre \((0, 0)\) and radius 1.

3) How do you use barycentric coordinates to linearly interpolate colour across a triangle?
4) Describe how translation transformations can be implemented with matrix multiplication.

5) Determine a model-view transformation corresponding to a camera with world space coordinates $(0, -3, 3)$ pointing at the origin of world space. You can express this as a sequence of named transformations (e.g. rotate around this axis by this angle) or if you prefer as a $4 \times 4$ matrix.

6) Write down an expression for a unit-length vector orthogonal to a triangle with vertices $(x_0, y_0)$, $(x_1, y_1)$, and $(x_2, y_2)$. 
7) Write down how camera \(x\) and \(y\) coordinates are transformed in a perspective projection.

8) How could you make a perspective view frustum as close as possible to a given orthographic view volume? (in terms of field of view etc.)

9) Why do we clip triangles against the near clipping pane before rasterization?
10) Write down pseudocode for the Z-buffer algorithm.